Appendix FEIR-E
Modified Project Noise Worksheets

Fourth & Central EIR

Noise and Vibration Worksheets

Noise and Vibration Calculations and Model Outputs

- **Construction noise worksheets on pages 5 through 26 are unchanged from the Draft EIR.**
- **Operational traffic noise worksheets on pages 28 through 34 have been updated as part of the Final EIR.**
- **Operational noise worksheets on pages 35 through 190 are unchanged from the Draft EIR.**
- **Noise measurement printouts on pages 192 through 203 are unchanged from the Draft EIR.**

Construction Noise Worksheets

Fourth & Central EIR
On-Site Construction Noise SUmmary

Construction Phase	A - Upper South						B - Lower South						C - West						D - North					
	R1	R2	R3	R4	R5	R6	R1	R2	R3	R4	R5	R6	R1	R2	R3	R4	R5	R6	R1	R2	R3	R4	R5	R6
Demolition	57.2	75.8	60.6	69.8	77.5	68.7	54.4	59.7	69.2	69.8	66.2	56.4	51.3	62.7	56.7	73.1	73.4	55.3	62.7	71.6	57.7	65.3	79.0	70.8
Site Preparation	49.8	68.3	53.7	62.1	69.7	61.6	47.1	52.4	61.6	61.6	58.4	49.1	51.3	62.7	56.7	73.1	73.2	55.3	54.4	63.3	49.6	57.0	70.8	62.6
Grading	53.3	72.0	56.7	66.0	73.7	64.8	50.5	55.8	65.3	66.0	62.3	52.5	49.9	61.2	55.3	71.4	71.8	53.8	59.1	68.1	54.1	61.7	75.6	67.3
Parking Garage Construction	54.2	72.9	57.6	66.9	74.6	65.7	51.4	56.8	66.3	66.8	63.2	53.5												
Foundations/Concrete Pour	57.5	76.2	60.9	70.2	77.9	69.1	57.9	63.3	72.6	73.1	69.5	59.9	57.3	68.6	62.7	78.6	79.1	61.2	59.3	68.2	54.2	61.8	75.8	67.5
Building 1 Construction																			61.9	70.8	56.9	64.4	78.3	70.0
Building 1 Arch Coating																			48.4	57.3	43.1	50.8	65.1	56.6
Building 2 Construction																			63.9	72.8	58.9	66.4	80.3	72.0
Building 2 Arch Coating																			42.9	52.2	40.7	46.4	56.9	51.8
Building 3 Construction	54.2	72.9	57.6	66.9	74.6	65.7																		
Building 3 Arch Coating	45.2	63.6	49.4	57.3	64.9	57.1																		
Building 4 Construction	54.2	72.9	57.6	66.9	74.6	65.7																		
Building 4 Arch Coating	44.5	63.1	48.3	57.0	64.6	56.3																		
Building 5 Construction	54.2	72.9	57.6	66.9	74.6	65.7																		
Building 5 Arch Coating	43.2	62.0	46.0	56.2	64.0	54.4																		
Building 6 Construction							55.5	60.8	70.3	71.0	67.3	57.5												
Building 6 Arch Coating							40.0	45.4	55.0	56.2	52.1	42.0												
Building 7 Construction							51.4	56.8	66.3	66.8	63.2	53.5												
Building 7 Arch Coating							40.0	45.4	55.0	56.2	52.1	42.0												
Building 8 Construction							51.4	56.8	66.3	66.8	63.2	53.5												
Building 8 Arch Coating							40.0	45.4	55.0	56.2	52.1	42.0												
Building 9 Construction							51.4	56.8	66.3	66.8	63.2	53.5												
Building 9 Arch Coating							51.4	56.8	66.3	66.8	63.2	53.5												
Building 10 Construction													54.0	65.3	59.4	74.9	75.5	57.8						
Building 10 Arch Coating													53.0	64.2	58.3	74.3	74.7	56.8						
Paving	55.2	73.8	58.7	67.8	75.5	66.8	52.5	57.8	67.3	67.7	64.2	54.5	54.6	65.8	60.0	75.5	76.1	58.4	60.8	69.7	55.9	63.4	77.1	68.9

Demolition + Site Preparation	57.9	76.5	61.4	70.5	78.2	69.5	55.1	60.5	69.9	70.4	66.8	57.2	54.4	65.7	59.8	76.1	76.3	58.3	63.3	72.2	58.3	65.9	79.6	71.5
Below Grade Parking + Parking Garage Const	56.8	75.5	60.2	69.5	77.2	68.3	54.0	59.3	68.8	69.4	65.8	56.0												
Demolition + Site Preparation + Below Grade Parking													55.7	67.0	61.1	77.3	77.6	59.6						
Building 1/2 Construction	66.0	74.9	61.0	68.6	82.4	74.2																		
Building 1 Construction + Building 1 Arch Coat	66.1	75.0	61.1	68.6	82.5	74.2																		
Building 2 Construction + Arch Coating + Pavir	65.6	74.5	60.7	68.2	82.0	73.8																		
Building 3/4/5 Construction	59.0	77.7	62.4	71.7	79.4	70.5																		
Building 3/4/5 Construction + Building 3/4 Arch	59.3	78.0	62.8	72.0	79.7	70.9																		
Building 5 Construction + Arch Coating + Pavir	57.9	76.6	61.3	70.5	78.2	69.4																		
Building 6/7/8/9 Construction+ Arch Coating	59.7	65.1	74.6	75.2	71.5	61.8																		
Building 6/7/8/9 Construction+ Arch Coating +	60.5	65.8	75.3	75.9	72.3	62.5																		
Building 10 Construction + Paving	57.3	68.6	62.7	78.2	78.8	61.1																		
Building 10 Construction + Arch Coating	56.5	67.8	61.9	77.6	78.1	60.4																		
Overlapping Phases	67.8	79.8	75.1	79.3	85.0	76.0																		
Maximum Noise Level	**67.8**	**79.8**	**75.3**	**79.3**	**85.0**	**76.0**																		

Site	**R1**	**R2**	**R3**	**R4**	**R5**	**R6**
A - Upper South	59.3	78.0	62.8	72.0	79.7	70.9
B - Lower South	60.5	65.8	75.3	75.9	72.3	62.5
C - West	57.3	68.6	62.7	78.2	78.8	61.1
D - North	66.1	75.0	61.1	68.6	82.5	74.2
Maximum Overlapping Noise Level	68.2	**80.2**	**75.9**	**81.1**	**85.6**	**76.2**
Ambient Daytime Noise Level	67.7	70.5	58.5	70.2	69.7	66.7
Threshold (Ambent + 5 dbA)	72.7	75.5	63.5	75.2	74.7	71.7
Exceeds Threshold?	No	Yes	Yes	Yes	Yes	Yes
	-4.5	4.7	12.4	5.9	10.9	4.5

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

Parameters

Leq to L10 factor	3

A - Upper South				R1					R2					R3					R4					R5					R6				
Construction Phase	**No. of**	**Reference Noise Level at**	**Acoustical**	**Distance**				**Estimated Noise Shieldin**	**Distance**				**Estimated Noise Shieldin**	**Distance**				**Estimated Noise Shieldin**	**Distance**				**Estimated Noise Shieldin**	**Distance**				**Estimated Noise Shieldin**	**Distance**				**Estimated Noise Shielding,**
Equipment Type	**Equip.**	**50ft, Lmax**	**Usage Factor**	**(ft)**	**Lmax**	**Leq**	**L10**	**g, dBA**	**(ft)**	**Lmax**	**Leq**	**L10**	**g, dBA**	**(ft)**	**Lmax**	**Leq**	**L10**	**g, dBA**	**(ft)**	**Lmax**	**Leq**	**L10**	**g, dBA**	**(ft)**	**Lmax**	**Leq**	**L10**	**g, dBA**	**(ft)**	**Lmax**	**Leq**	**L10**	**dBA**
Demolition					***63***	***57***				***81***	***76***				***66***	***61***				***75***	***70***				***83***	***78***				***74***	***69***		
Compressor (Air)	1	80	40%	1160	43	39	42	10	475	60	56	59	0	1065	48	44	47	5	635	53	49	52	5	500	60	56	59	0	830	56	52	55	0
Man Lift	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	60	56	59	0	1065	48	44	47	5	635	53	49	52	5	500	60	56	59	0	830	56	52	55	0
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	58	54	57	0	1265	47	43	46	5	850	50	46	49	5	700	57	53	56	0	1030	54	50	53	0
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	58	54	57	0	1265	47	43	46	5	850	50	46	49	5	700	57	53	56	0	1030	54	50	53	0
Other Equipment	1	85	50%	690	52	49	52	10	250	71	68	71	0	890	55	52	55	5	275	65	62	65	5	200	73	70	73	0	600	63	60	63	0
Other Equipment	1	85	50%	690	52	49	52	10	250	71	68	71	0	890	55	52	55	5	275	65	62	65	5	200	73	70	73	0	600	63	60	63	0
Excavator	1	85	40%	690	52	48	51	10	250	71	67	70	0	890	55	51	54	5	275	65	61	64	5	200	73	69	72	0	600	63	59	62	0
Excavator	1	85	40%	1160	48	44	47	10	475	65	61	64	0	1065	53	49	52	5	635	58	54	57	5	500	65	61	64	0	830	61	57	60	0
Dump Truck	1	84	40%	1160	47	43	46	10	475	64	60	63	0	1065	52	48	51	5	635	57	53	56	5	500	64	60	63	0	830	60	56	59	0
Vacuum Street Sweeper	1	80	10%	1460	41	31	34	10	650	58	48	51	0	1265	47	37	40	5	850	50	40	43	5	700	57	47	50	0	1030	54	44	47	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Site Preparation					***54***	***50***				***72***	***68***				***58***	***54***				***66***	***62***				***74***	***70***				***66***	***62***		
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	58	54	57	0	1265	47	43	46	5	850	50	46	49	5	700	57	53	56	0	1030	54	50	53	0
Grader	1	85	40%	690	52	48	51	10	250	71	67	70	0	890	55	51	54	5	275	65	61	64	5	200	73	69	72	0	600	63	59	62	0
Scraper	1	85	40%	1160	48	44	47	10	475	65	61	64	0	1065	53	49	52	5	635	58	54	57	5	500	65	61	64	0	830	61	57	60	0
Grading					***57***	***53***				***76***	***72***				***61***	***57***				***70***	***66***				***78***	***74***				***69***	***65***		
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	60	56	59	0	1065	48	44	47	5	635	53	49	52	5	500	60	56	59	0	830	56	52	55	0
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	60	56	59	0	1065	48	44	47	5	635	53	49	52	5	500	60	56	59	0	830	56	52	55	0
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	60	56	59	0	1065	48	44	47	5	635	53	49	52	5	500	60	56	59	0	830	56	52	55	0
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	58	54	57	0	1265	47	43	46	5	850	50	46	49	5	700	57	53	56	0	1030	54	50	53	0
Excavator	1	85	40%	690	52	48	51	10	250	71	67	70	0	890	55	51	54	5	275	65	61	64	5	200	73	69	72	0	600	63	59	62	0
Excavator	1	85	40%	690	52	48	51	10	250	71	67	70	0	890	55	51	54	5	275	65	61	64	5	200	73	69	72	0	600	63	59	62	0
Dump Truck	1	84	40%	690	51	47	50	10	250	70	66	69	0	890	54	50	53	5	275	64	60	63	5	200	72	68	71	0	600	62	58	61	0
Vacuum Street Sweeper	1	80	10%	1460	41	31	34	10	650	58	48	51	0	1265	47	37	40	5	850	50	40	43	5	700	57	47	50	0	1030	54	44	47	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Parking Garage Construction					***61***	***54***				***79***	***73***				***64***	***58***				***73***	***67***				***81***	***75***				***72***	***66***		
Man Lift	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Crane	1	85	16%	1160	48	40	43	10	475	65	57	60	0	1065	53	45	48	5	635	58	50	53	5	500	65	57	60	0	830	61	53	56	0
Crane	1	85	16%	1160	48	40	43	10	475	65	57	60	0	1065	53	45	48	5	635	58	50	53	5	500	65	57	60	0	830	61	53	56	0
Dump Truck	1	84	40%	690	51	47	50	10	250	70	66	69	0	890	54	50	53	5	275	64	60	63	5	200	72	68	71	0	600	62	58	61	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Pumps	1	77	50%	1160	40	37	40	10	475	57	54	57	0	1065	45	42	45	5	635	50	47	50	5	500	57	54	57	0	830	53	50	53	0
Pumps	1	77	50%	1460	38	35	38	10	650	55	52	55	0	1265	44	41	44	5	850	47	44	47	5	700	54	51	54	0	1030	51	48	51	0
Roller	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Foundations/Concrete Pour					***64***	***58***				***83***	***76***				***67***	***61***				***77***	***70***				***84***	***78***				***76***	***69***		
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	58	54	57	0	1265	47	43	46	5	850	50	46	49	5	700	57	53	56	0	1030	54	50	53	0
Auger Drill Rig	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Auger Drill Rig	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Auger Drill Rig	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Crane	1	85	16%	1160	48	40	43	10	475	65	57	60	0	1065	53	45	48	5	635	58	50	53	5	500	65	57	60	0	830	61	53	56	0
Crane	1	85	16%	1460	46	38	41	10	650	63	55	58	0	1265	52	44	47	5	850	55	47	50	5	700	62	54	57	0	1030	59	51	54	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Grader	1	85	40%	690	52	48	51	10	250	71	67	70	0	890	55	51	54	5	275	65	61	64	5	200	73	69	72	0	600	63	59	62	0
Grader	1	85	40%	690	52	48	51	10	250	71	67	70	0	890	55	51	54	5	275	65	61	64	5	200	73	69	72	0	600	63	59	62	0
Pumps	1	77	50%	1460	38	35	38	10	650	55	52	55	0	1265	44	41	44	5	850	47	44	47	5	700	54	51	54	0	1030	51	48	51	0
Pumps	1	77	50%	1460	38	35	38	10	650	55	52	55	0	1265	44	41	44	5	850	47	44	47	5	700	54	51	54	0	1030	51	48	51	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0

A - Upper South				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Building 3 Construction					***61***	***54***				***79***	***73***				***64***	***58***				***73***	***67***				***81***	***75***				***72***	***66***		
Man Lift	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Man Lift	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Crane	1	85	16%	1160	48	40	43	10	475	65	57	60	0	1065	53	45	48	5	635	58	50	53	5	500	65	57	60	0	830	61	53	56	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Dump Truck	1	84	40%	690	51	47	50	10	250	70	66	69	0	890	54	50	53	5	275	64	60	63	5	200	72	68	71	0	600	62	58	61	0
Pumps	1	77	50%	1160	40	37	40	10	475	57	54	57	0	1065	45	42	45	5	635	50	47	50	5	500	57	54	57	0	830	53	50	53	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Welder	1	73	40%	1460	34	30	33	10	650	51	47	50	0	1265	40	36	39	5	850	43	39	42	5	700	50	46	49	0	1030	47	43	46	0
Welder	1	73	40%	1460	34	30	33	10	650	51	47	50	0	1265	40	36	39	5	850	43	39	42	5	700	50	46	49	0	1030	47	43	46	0
Building 3 Arch Coating					***49***	***45***				***68***	***64***				***53***	***49***				***61***	***57***				***69***	***65***				***61***	***57***		
Compressor (air)	1	80	40%	690	47	43	46	10	250	66	62	65	0	890	50	46	49	5	275	60	56	59	5	200	68	64	67	0	600	58	54	57	0
Compressor (air)	1	80	40%	1160	43	39	42	10	475	60	56	59	0	1065	48	44	47	5	635	53	49	52	5	500	60	56	59	0	830	56	52	55	0
Compressor (air)	1	80	40%	1460	41	37	40	10	650	58	54	57	0	1265	47	43	46	5	850	50	46	49	5	700	57	53	56	0	1030	54	50	53	0
Building 4 Construction					***61***	***54***				***79***	***73***				***64***	***58***				***73***	***67***				***81***	***75***				***72***	***66***		
Man Lift	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Man Lift	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Crane	1	85	16%	1160	48	40	43	10	475	65	57	60	0	1065	53	45	48	5	635	58	50	53	5	500	65	57	60	0	830	61	53	56	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Dump Truck	1	84	40%	690	51	47	50	10	250	70	66	69	0	890	54	50	53	5	275	64	60	63	5	200	72	68	71	0	600	62	58	61	0
Pumps	1	77	50%	1160	40	37	40	10	475	57	54	57	0	1065	45	42	45	5	635	50	47	50	5	500	57	54	57	0	830	53	50	53	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Welder	1	73	40%	1460	34	30	33	10	650	51	47	50	0	1265	40	36	39	5	850	43	39	42	5	700	50	46	49	0	1030	47	43	46	0
Welder	1	73	40%	1460	34	30	33	10	650	51	47	50	0	1265	40	36	39	5	850	43	39	42	5	700	50	46	49	0	1030	47	43	46	0
Building 4 Arch Coating					***49***	***45***				***67***	***63***				***52***	***48***				***61***	***57***				***69***	***65***				***60***	***56***		
Compressor (air)	1	80	40%	690	47	43	46	10	250	66	62	65	0	890	50	46	49	5	275	60	56	59	5	200	68	64	67	0	600	58	54	57	0
Compressor (air)	1	80	40%	1160	43	39	42	10	475	60	56	59	0	1065	48	44	47	5	635	53	49	52	5	500	60	56	59	0	830	56	52	55	0
Building 5 Construction					***61***	***54***				***79***	***73***				***64***	***58***				***73***	***67***				***81***	***75***				***72***	***66***		
Man Lift	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Crane	1	85	16%	1160	48	40	43	10	475	65	57	60	0	1065	53	45	48	5	635	58	50	53	5	500	65	57	60	0	830	61	53	56	0
Crane	1	85	16%	1160	48	40	43	10	475	65	57	60	0	1065	53	45	48	5	635	58	50	53	5	500	65	57	60	0	830	61	53	56	0
Dump Truck	1	84	40%	690	51	47	50	10	250	70	66	69	0	890	54	50	53	5	275	64	60	63	5	200	72	68	71	0	600	62	58	61	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0
Pumps	1	77	50%	1160	40	37	40	10	475	57	54	57	0	1065	45	42	45	5	635	50	47	50	5	500	57	54	57	0	830	53	50	53	0
Pumps	1	77	50%	1460	38	35	38	10	650	55	52	55	0	1265	44	41	44	5	850	47	44	47	5	700	54	51	54	0	1030	51	48	51	0
Roller	1	85	20%	690	52	45	48	10	250	71	64	67	0	890	55	48	51	5	275	65	58	61	5	200	73	66	69	0	600	63	56	59	0
Roller	1	85	20%	1160	48	41	44	10	475	65	58	61	0	1065	53	46	49	5	635	58	51	54	5	500	65	58	61	0	830	61	54	57	0
Building 5 Arch Coating					***47***	***43***				***66***	***62***				***50***	***46***				***60***	***56***				***68***	***64***				***58***	***54***		
Compressor (air)	1	80	40%	690	47	43	46	10	250	66	62	65	0	890	50	46	49	5	275	60	56	59	5	200	68	64	67	0	600	58	54	57	0
Paving					***60***	***55***				***79***	***74***				***63***	***59***				***73***	***68***				***80***	***76***				***71***	***67***		
Drum Mixer	1	80	50%	1160	43	40	43	10	475	60	57	60	0	1065	48	45	48	5	635	53	50	53	5	500	60	57	60	0	830	56	53	56	0
Concrete Saw	1	90	20%	690	57	50	53	10	250	76	69	72	0	890	60	53	56	5	275	70	63	66	5	200	78	71	74	0	600	68	61	64	0
Dump Truck	1	84	40%	1160	47	43	46	10	475	64	60	63	0	1065	52	48	51	5	635	57	53	56	5	500	64	60	63	0	830	60	56	59	0
Paver	1	85	50%	690	52	49	52	10	250	71	68	71	0	890	55	52	55	5	275	65	62	65	5	200	73	70	73	0	600	63	60	63	0
Other Equipment	1	85	50%	690	52	49	52	10	250	71	68	71	0	890	55	52	55	5	275	65	62	65	5	200	73	70	73	0	600	63	60	63	0
Other Equipment	1	85	50%	1160	48	45	48	10	475	65	62	65	0	1065	53	50	53	5	635	58	55	58	5	500	65	62	65	0	830	61	58	61	0
Pumps	1	77	50%	1460	38	35	38	10	650	55	52	55	0	1265	44	41	44	5	850	47	44	47	5	700	54	51	54	0	1030	51	48	51	0
Forklift	1	75	10%	1460	36	26	29	10	650	53	43	46	0	1265	42	32	35	5	850	45	35	38	5	700	52	42	45	0	1030	49	39	42	0

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

ESA

Parameters

Leq to L10 factor	3

B - Lower South				R1					R2					R3					R4					R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition					***60***	***54***				***65***	***60***				***75***	***69***				***75***	***70***				***71***	***66***				***62***	***56***			
Compressor (Air)	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Man Lift	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1500	40	36	39	10	1460	46	42	45	5	1010	54	50	53	0	900	50	46	49	5	900	50	46	49	5	1210	42	38	41	10
Tractor/Loader/Backhoe	1	80	40%	1500	40	36	39	10	1460	46	42	45	5	1010	54	50	53	0	900	50	46	49	5	900	50	46	49	5	1210	42	38	41	10
Other Equipment	1	85	50%	1000	49	46	49	10	960	54	51	54	5	560	64	61	64	0	275	65	62	65	5	440	61	58	61	5	795	51	48	51	10
Other Equipment	1	85	50%	1000	49	46	49	10	960	54	51	54	5	560	64	61	64	0	275	65	62	65	5	440	61	58	61	5	795	51	48	51	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Excavator	1	85	40%	1300	47	43	46	10	1260	52	48	51	5	810	61	57	60	0	700	57	53	56	5	700	57	53	56	5	1010	49	45	48	10
Dump Truck	1	84	40%	1300	46	42	45	10	1260	51	47	50	5	810	60	56	59	0	700	56	52	55	5	700	56	52	55	5	1010	48	44	47	10
Vacuum Street Sweeper	1	80	10%	1500	40	30	33	10	1460	46	36	39	5	1010	54	44	47	0	900	50	40	43	5	900	50	40	43	5	1210	42	32	35	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Site Preparation					***51***	***47***				***56***	***52***				***66***	***62***				***66***	***62***				***62***	***58***				***53***	***49***			
Tractor/Loader/Backhoe	3	80	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Tractor/Loader/Backhoe	2	80	40%	1300	45	41	44	10	1260	50	46	49	5	810	59	55	58	0	700	55	51	54	5	700	55	51	54	5	1010	47	43	46	10
Tractor/Loader/Backhoe	2	80	40%	1500	43	39	42	10	1460	49	45	48	5	1010	57	53	56	0	900	53	49	52	5	900	53	49	52	5	1210	45	41	44	10
Grading					***55***	***50***				***60***	***56***				***69***	***65***				***70***	***66***				***66***	***62***				***57***	***53***			
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1500	40	36	39	10	1460	46	42	45	5	1010	54	50	53	0	900	50	46	49	5	900	50	46	49	5	1210	42	38	41	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Dump Truck	1	84	40%	1000	48	44	47	10	960	53	49	52	5	560	63	59	62	0	275	64	60	63	5	440	60	56	59	5	795	50	46	49	10
Vacuum Street Sweeper	1	80	10%	1500	40	30	33	10	1460	46	36	39	5	1010	54	44	47	0	900	50	40	43	5	900	50	40	43	5	1210	42	32	35	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Parking Garage Construction					***58***	***51***				***63***	***57***				***73***	***66***				***73***	***67***				***70***	***63***				***60***	***53***			
Man Lift	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Man Lift	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Crane	1	85	16%	1300	47	39	42	10	1260	52	44	47	5	810	61	53	56	0	700	57	49	52	5	700	57	49	52	5	1010	49	41	44	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Dump Truck	1	84	40%	1000	48	44	47	10	960	53	49	52	5	560	63	59	62	0	275	64	60	63	5	440	60	56	59	5	795	50	46	49	10
Pumps	1	77	50%	1300	39	36	39	10	1260	44	41	44	5	810	53	50	53	0	700	49	46	49	5	700	49	46	49	5	1010	41	38	41	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10

B - Lower South				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Foundations/Concrete Pour					***63***	***58***				***69***	***63***				***78***	***73***				***78***	***73***				***75***	***70***				***65***	***60***		
Auger Drill Rig	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Auger Drill Rig	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Auger Drill Rig	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1260	47	43	46	5	810	56	52	55	0	700	52	48	51	5	700	52	48	51	5	1010	44	40	43	10
Tractor/Loader/Backhoe	1	80	40%	1000	44	40	43	10	1000	49	45	48	5	1000	54	50	53	0	1000	49	45	48	5	1000	49	45	48	5	1000	44	40	43	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Excavator	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Forklift	1	75	10%	1000	39	29	32	10	1000	44	34	37	5	1000	49	39	42	0	1000	44	34	37	5	1000	44	34	37	5	1000	39	29	32	10
Forklift	1	75	10%	1000	39	29	32	10	1000	44	34	37	5	1000	49	39	42	0	1000	44	34	37	5	1000	44	34	37	5	1000	39	29	32	10
Forklift	1	75	10%	1000	39	29	32	10	1000	44	34	37	5	1000	49	39	42	0	1000	44	34	37	5	1000	44	34	37	5	1000	39	29	32	10
Forklift	1	75	10%	1000	39	29	32	10	1000	44	34	37	5	1000	49	39	42	0	1000	44	34	37	5	1000	44	34	37	5	1000	39	29	32	10
Grader	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Grader	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Grader	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Grader	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Dump Truck	1	84	40%	1000	48	44	47	10	960	53	49	52	5	560	63	59	62	0	275	64	60	63	5	440	60	56	59	5	795	50	46	49	10
Dump Truck	1	84	40%	1300	46	42	45	10	1260	51	47	50	5	810	60	56	59	0	700	56	52	55	5	700	56	52	55	5	1010	48	44	47	10
Dump Truck	1	84	40%	1300	46	42	45	10	1260	51	47	50	5	810	60	56	59	0	700	56	52	55	5	700	56	52	55	5	1010	48	44	47	10
Pumps	1	77	50%	1000	41	38	41	10	1000	46	43	46	5	1000	51	48	51	0	1000	46	43	46	5	1000	46	43	46	5	1000	41	38	41	10
Pumps	1	77	50%	1000	41	38	41	10	1000	46	43	46	5	1000	51	48	51	0	1000	46	43	46	5	1000	46	43	46	5	1000	41	38	41	10
Pumps	1	77	50%	1000	41	38	41	10	1000	46	43	46	5	1000	51	48	51	0	1000	46	43	46	5	1000	46	43	46	5	1000	41	38	41	10
Compactor (qround)	1	80	20%	1000	44	37	40	10	1000	49	42	45	5	1000	54	47	50	0	1000	49	42	45	5	1000	49	42	45	5	1000	44	37	40	10
Compactor (ground)	1	80	20%	1000	44	37	40	10	1000	49	42	45	5	1000	54	47	50	0	1000	49	42	45	5	1000	49	42	45	5	1000	44	37	40	10
Compactor (qround)	1	80	20%	1000	44	37	40	10	1000	49	42	45	5	1000	54	47	50	0	1000	49	42	45	5	1000	49	42	45	5	1000	44	37	40	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Building 6 Construction					***62***	***55***				***67***	***61***				***77***	***70***				***78***	***71***				***74***	***67***				***64***	***58***		
Man Lift	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Man Lift	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Crane	1	85	16%	1300	47	39	42	10	1260	52	44	47	5	810	61	53	56	0	700	57	49	52	5	700	57	49	52	5	1010	49	41	44	10
Crane	1	85	16%	1500	45	37	40	10	1460	51	43	46	5	1010	59	51	54	0	900	55	47	50	5	900	55	47	50	5	1210	47	39	42	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Grader	1	85	40%	1000	49	45	48	10	960	54	50	53	5	560	64	60	63	0	275	65	61	64	5	440	61	57	60	5	795	51	47	50	10
Grader	1	85	40%	1300	47	43	46	10	1260	52	48	51	5	810	61	57	60	0	700	57	53	56	5	700	57	53	56	5	1010	49	45	48	10
Dump Truck	1	84	40%	1300	46	42	45	10	1260	51	47	50	5	810	60	56	59	0	700	56	52	55	5	700	56	52	55	5	1010	48	44	47	10
Pumps	1	77	50%	1500	37	34	37	10	1460	43	40	43	5	1010	51	48	51	0	900	47	44	47	5	900	47	44	47	5	1210	39	36	39	10
Pumps	1	77	50%	1500	37	34	37	10	1460	43	40	43	5	1010	51	48	51	0	900	47	44	47	5	900	47	44	47	5	1210	39	36	39	10
Building 6 Arch Coating					***44***	***40***				***49***	***45***				***59***	***55***				***60***	***56***				***56***	***52***				***46***	***42***		
Compressor (air)	1	80	40%	1000	44	40	43	10	960	49	45	48	5	560	59	55	58	0	275	60	56	59	5	440	56	52	55	5	795	46	42	45	10

B - Lower South				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Building 7 Construction					***58***	***51***				***63***	***57***				***73***	***66***				***73***	***67***				***70***	***63***				***60***	***53***			
Man Lift	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Man Lift	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Crane	1	85	16%	1300	47	39	42	10	1260	52	44	47	5	810	61	53	56	0	700	57	49	52	5	700	57	49	52	5	1010	49	41	44	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Dump Truck	1	84	40%	1000	48	44	47	10	960	53	49	52	5	560	63	59	62	0	275	64	60	63	5	440	60	56	59	5	795	50	46	49	10
Pumps	1	77	50%	1300	39	36	39	10	1260	44	41	44	5	810	53	50	53	0	700	49	46	49	5	700	49	46	49	5	1010	41	38	41	10
Roller	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10
Building 7 Arch Coating					***44***	***40***				***49***	***45***				***59***	***55***				***60***	***56***				***56***	***52***				***46***	***42***			
Compressor (air)	1	80	40%	1000	44	40	43	10	960	49	45	48	5	560	59	55	58	0	275	60	56	59	5	440	56	52	55	5	795	46	42	45	10
Building 8 Construction					***58***	***51***				***63***	***57***				***73***	***66***				***73***	***67***				***70***	***63***				***60***	***53***			
Man Lift	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Man Lift	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Crane	1	85	16%	1300	47	39	42	10	1260	52	44	47	5	810	61	53	56	0	700	57	49	52	5	700	57	49	52	5	1010	49	41	44	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Dump Truck	1	84	40%	1000	48	44	47	10	960	53	49	52	5	560	63	59	62	0	275	64	60	63	5	440	60	56	59	5	795	50	46	49	10
Pumps	1	77	50%	1300	39	36	39	10	1260	44	41	44	5	810	53	50	53	0	700	49	46	49	5	700	49	46	49	5	1010	41	38	41	10
Roller	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10
Building 8 Arch Coating					***44***	***40***				***49***	***45***				***59***	***55***				***60***	***56***				***56***	***52***				***46***	***42***			
Compressor (air)	1	80	40%	1000	44	40	43	10	960	49	45	48	5	560	59	55	58	0	275	60	56	59	5	440	56	52	55	5	795	46	42	45	10
Building 9 Construction					***58***	***51***				***63***	***57***				***73***	***66***				***73***	***67***				***70***	***63***				***60***	***53***			
Man Lift	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Man Lift	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Crane	1	85	16%	1300	47	39	42	10	1260	52	44	47	5	810	61	53	56	0	700	57	49	52	5	700	57	49	52	5	1010	49	41	44	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Dump Truck	1	84	40%	1000	48	44	47	10	960	53	49	52	5	560	63	59	62	0	275	64	60	63	5	440	60	56	59	5	795	50	46	49	10
Pumps	1	77	50%	1300	39	36	39	10	1260	44	41	44	5	810	53	50	53	0	700	49	46	49	5	700	49	46	49	5	1010	41	38	41	10
Roller	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10
Paving					***57***	***53***				***62***	***58***				***72***	***67***				***73***	***68***				***69***	***64***				***59***	***55***			
Drum Mixer	1	80	50%	1300	42	39	42	10	1260	47	44	47	5	810	56	53	56	0	700	52	49	52	5	700	52	49	52	5	1010	44	41	44	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Dump Truck	1	84	40%	1300	46	42	45	10	1260	51	47	50	5	810	60	56	59	0	700	56	52	55	5	700	56	52	55	5	1010	48	44	47	10
Paver	1	85	50%	1000	49	46	49	10	960	54	51	54	5	560	64	61	64	0	275	65	62	65	5	440	61	58	61	5	795	51	48	51	10
Other Equipment	1	85	50%	1000	49	46	49	10	960	54	51	54	5	560	64	61	64	0	275	65	62	65	5	440	61	58	61	5	795	51	48	51	10
Other Equipment	1	85	50%	1300	47	44	47	10	1260	52	49	52	5	810	61	58	61	0	700	57	54	57	5	700	57	54	57	5	1010	49	46	49	10
Pumps	1	77	50%	1500	37	34	37	10	1460	43	40	43	5	1010	51	48	51	0	900	47	44	47	5	900	47	44	47	5	1210	39	36	39	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Building 9 Arch Coating					***58***	***51***				***63***	***57***				***73***	***66***				***73***	***67***				***70***	***63***				***60***	***53***			
Man Lift	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Man Lift	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Concrete Saw	1	90	20%	1000	54	47	50	10	960	59	52	55	5	560	69	62	65	0	275	70	63	66	5	440	66	59	62	5	795	56	49	52	10
Crane	1	85	16%	1300	47	39	42	10	1260	52	44	47	5	810	61	53	56	0	700	57	49	52	5	700	57	49	52	5	1010	49	41	44	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Forklift	1	75	10%	1500	35	25	28	10	1460	41	31	34	5	1010	49	39	42	0	900	45	35	38	5	900	45	35	38	5	1210	37	27	30	10
Dump Truck	1	84	40%	1000	48	44	47	10	960	53	49	52	5	560	63	59	62	0	275	64	60	63	5	440	60	56	59	5	795	50	46	49	10
Pumps	1	77	50%	1300	39	36	39	10	1260	44	41	44	5	810	53	50	53	0	700	49	46	49	5	700	49	46	49	5	1010	41	38	41	10
Roller	1	85	20%	1000	49	42	45	10	960	54	47	50	5	560	64	57	60	0	275	65	58	61	5	440	61	54	57	5	795	51	44	47	10
Roller	1	85	20%	1300	47	40	43	10	1260	52	45	48	5	810	61	54	57	0	700	57	50	53	5	700	57	50	53	5	1010	49	42	45	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10
Welder	1	73	40%	1500	33	29	32	10	1460	39	35	38	5	1010	47	43	46	0	900	43	39	42	5	900	43	39	42	5	1210	35	31	34	10

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

ESA

Parameters

Leq to L10 factor	3

C - West				R1					R2					R3					R4					R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition					***57***	***51***				***69***	***63***				***63***	***57***				***79***	***73***					***79***	***73***				***61***	***55***		
Compressor (Air)	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	55	51	54	5	120	71	67	70	5	210	72	68	71	0	550	53	49	52	10
Vacuum Street Sweeper	1	80	10%	975	44	34	37	10	850	55	45	48	0	935	50	40	43	5	220	62	52	55	5	310	64	54	57	0	650	48	38	41	10
Tractor/Loader/Backhoe	1	80	40%	875	45	41	44	10	750	56	52	55	0	835	51	47	50	5	120	67	63	66	5	210	68	64	67	0	550	49	45	48	10
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Site Preparation					***57***	***51***				***69***	***63***				***63***	***57***				***79***	***73***					***79***	***73***				***61***	***55***		
Compressor (Air)	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	55	51	54	5	120	71	67	70	5	210	72	68	71	0	550	53	49	52	10
Vacuum Street Sweeper	1	80	10%	975	44	34	37	10	850	55	45	48	0	935	50	40	43	5	220	62	52	55	5	310	64	54	57	0	650	48	38	41	10
Tractor/Loader/Backhoe	1	80	40%	875	45	41	44	10	750	56	52	55	0	835	51	47	50	5	120	67	63	66	5	210	68	64	67	0	550	49	45	48	10
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Grading					***54***	***50***				***66***	***61***				***60***	***55***				***75***	***71***					***76***	***72***				***58***	***54***		
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Excavator	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	56	52	55	5	120	72	68	71	5	210	73	69	72	0	550	54	50	53	10
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	55	51	54	5	120	71	67	70	5	210	72	68	71	0	550	53	49	52	10
Vacuum Street Sweeper	1	80	10%	1075	43	33	36	10	950	54	44	47	0	1035	49	39	42	5	320	59	49	52	5	410	62	52	55	0	750	46	36	39	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Foundations/Concrete Pour					***63***	***57***				***75***	***69***				***69***	***63***				***85***	***79***					***85***	***79***				***67***	***61***		
Auger Drill Rig	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	56	49	52	5	120	72	65	68	5	210	73	66	69	0	550	54	47	50	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Crane	1	85	16%	875	50	42	45	10	750	61	54	57	0	835	56	48	51	5	120	72	64	67	5	210	73	65	68	0	550	54	46	49	10
Crane	1	85	16%	975	49	41	44	10	850	60	52	55	0	935	55	47	50	5	220	67	59	62	5	310	69	61	64	0	650	53	45	48	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Grader	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	56	52	55	5	120	72	68	71	5	210	73	69	72	0	550	54	50	53	10
Grader	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	56	52	55	5	120	72	68	71	5	210	73	69	72	0	550	54	50	53	10
Grader	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	56	52	55	5	120	72	68	71	5	210	73	69	72	0	550	54	50	53	10
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	54	50	53	5	220	66	62	65	5	310	68	64	67	0	650	52	48	51	10
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	54	50	53	5	220	66	62	65	5	310	68	64	67	0	650	52	48	51	10
Pumps	1	77	50%	1075	40	37	40	10	950	51	48	51	0	1035	46	43	46	5	320	56	53	56	5	410	59	56	59	0	750	43	40	43	10
Pumps	1	77	50%	1075	40	37	40	10	950	51	48	51	0	1035	46	43	46	5	320	56	53	56	5	410	59	56	59	0	750	43	40	43	10
Pumps	1	77	50%	1075	40	37	40	10	950	51	48	51	0	1035	46	43	46	5	320	56	53	56	5	410	59	56	59	0	750	43	40	43	10
Compactor (ground)	1	80	20%	975	44	37	40	10	850	55	48	51	0	935	50	43	46	5	220	62	55	58	5	310	64	57	60	0	650	48	41	44	10
Compactor (ground)	1	80	20%	1075	43	36	39	10	950	54	47	50	0	1035	49	42	45	5	320	59	52	55	5	410	62	55	58	0	750	46	39	42	10
Compactor (ground)	1	80	20%	1075	43	36	39	10	950	54	47	50	0	1035	49	42	45	5	320	59	52	55	5	410	62	55	58	0	750	46	39	42	10
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	56	49	52	5	120	72	65	68	5	210	73	66	69	0	550	54	47	50	10
Roller	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	55	48	51	5	220	67	60	63	5	310	69	62	65	0	650	53	46	49	10
Roller	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	55	48	51	5	220	67	60	63	5	310	69	62	65	0	650	53	46	49	10
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	50	46	49	5	220	62	58	61	5	310	64	60	63	0	650	48	44	47	10

C - West				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Building 10 Construction					***60***	***54***				***72***	***65***				***66***	***59***				***82***	***75***				***82***	***75***				***64***	***58***		
Man Lift	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	56	49	52	5	120	72	65	68	5	210	73	66	69	0	550	54	47	50	10
Man Lift	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	55	48	51	5	220	67	60	63	5	310	69	62	65	0	650	53	46	49	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Crane	1	85	16%	875	50	42	45	10	750	61	54	57	0	835	56	48	51	5	120	72	64	67	5	210	73	65	68	0	550	54	46	49	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	54	50	53	5	220	66	62	65	5	310	68	64	67	0	650	52	48	51	10
Pumps	1	77	50%	975	41	38	41	10	850	52	49	52	0	935	47	44	47	5	220	59	56	59	5	310	61	58	61	0	650	45	42	45	10
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	56	49	52	5	120	72	65	68	5	210	73	66	69	0	550	54	47	50	10
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	56	49	52	5	120	72	65	68	5	210	73	66	69	0	550	54	47	50	10
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	54	50	53	5	220	66	62	65	5	310	68	64	67	0	650	52	48	51	10
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	54	50	53	5	220	66	62	65	5	310	68	64	67	0	650	52	48	51	10
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	42	38	41	5	320	52	48	51	5	410	55	51	54	0	750	39	35	38	10
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	42	38	41	5	320	52	48	51	5	410	55	51	54	0	750	39	35	38	10
Building 10 Arch Coating					***60***	***53***				***71***	***64***				***65***	***58***				***81***	***74***				***81***	***75***				***63***	***57***		
Man Lift	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	56	49	52	5	120	72	65	68	5	210	73	66	69	0	550	54	47	50	10
Man Lift	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	55	48	51	5	220	67	60	63	5	310	69	62	65	0	650	53	46	49	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Crane	1	85	16%	975	49	41	44	10	850	60	52	55	0	935	55	47	50	5	220	67	59	62	5	310	69	61	64	0	650	53	45	48	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	55	51	54	5	120	71	67	70	5	210	72	68	71	0	550	53	49	52	10
Pumps	1	77	50%	975	41	38	41	10	850	52	49	52	0	935	47	44	47	5	220	59	56	59	5	310	61	58	61	0	650	45	42	45	10
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	56	49	52	5	120	72	65	68	5	210	73	66	69	0	550	54	47	50	10
Roller	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	55	48	51	5	220	67	60	63	5	310	69	62	65	0	650	53	46	49	10
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	42	38	41	5	320	52	48	51	5	410	55	51	54	0	750	39	35	38	10
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	42	38	41	5	320	52	48	51	5	410	55	51	54	0	750	39	35	38	10
Paving					***59***	***55***				***70***	***66***				***64***	***60***				***80***	***75***				***81***	***76***				***63***	***58***		
Drum Mixer	1	80	50%	1075	43	40	43	10	950	54	51	54	0	1035	49	46	49	5	320	59	56	59	5	410	62	59	62	0	750	46	43	46	10
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	61	54	57	5	120	77	70	73	5	210	78	71	74	0	550	59	52	55	10
Grader	1	85	40%	975	49	45	48	10	850	60	56	59	0	935	55	51	54	5	220	67	63	66	5	310	69	65	68	0	650	53	49	52	10
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	44	34	37	5	320	54	44	47	5	410	57	47	50	0	750	41	31	34	10
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	54	50	53	5	220	66	62	65	5	310	68	64	67	0	650	52	48	51	10
Paver	1	85	50%	875	50	47	50	10	750	61	58	61	0	835	56	53	56	5	120	72	69	72	5	210	73	70	73	0	550	54	51	54	10
Other Equipment	1	85	50%	875	50	47	50	10	750	61	58	61	0	835	56	53	56	5	120	72	69	72	5	210	73	70	73	0	550	54	51	54	10
Other Equipment	1	85	50%	975	49	46	49	10	850	60	57	60	0	935	55	52	55	5	220	67	64	67	5	310	69	66	69	0	650	53	50	53	10
Pumps	1	77	50%	1075	40	37	40	10	950	51	48	51	0	1035	46	43	46	5	320	56	53	56	5	410	59	56	59	0	750	43	40	43	10

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

ESA

Parameters

Leq to L10 factor	3

D - North				R1					R2					R3					R4					R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition					***68***	***63***				***77***	***72***				***63***	***58***				***71***	***65***				***84***	***79***				***76***	***71***		
Compressor (Air)	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Man Lift	1	85	20%	520	55	48	51	10	600	63	56	59	0	1450	51	44	47	5	650	58	51	54	5	300	69	62	65	0	640	63	56	59	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	56	52	55	0	1650	45	41	44	5	850	50	46	49	5	450	61	57	60	0	815	56	52	55	0
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	56	52	55	0	1650	45	41	44	5	850	50	46	49	5	450	61	57	60	0	815	56	52	55	0
Other Equipment	1	85	50%	380	57	54	57	10	430	66	63	66	0	1250	52	49	52	5	510	60	57	60	5	175	74	71	74	0	470	66	63	66	0
Other Equipment	1	85	50%	380	57	54	57	10	430	66	63	66	0	1250	52	49	52	5	510	60	57	60	5	175	74	71	74	0	470	66	63	66	0
Excavator	1	85	40%	380	57	53	56	10	430	66	62	65	0	1250	52	48	51	5	510	60	56	59	5	175	74	70	73	0	470	66	62	65	0
Excavator	1	85	40%	520	55	51	54	10	600	63	59	62	0	1450	51	47	50	5	650	58	54	57	5	300	69	65	68	0	640	63	59	62	0
Dump Truck	1	84	40%	520	54	50	53	10	600	62	58	61	0	1450	50	46	49	5	650	57	53	56	5	300	68	64	67	0	640	62	58	61	0
Vacuum Street Sweeper	1	80	10%	720	47	37	40	10	775	56	46	49	0	1650	45	35	38	5	850	50	40	43	5	450	61	51	54	0	815	56	46	49	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Site Preparation					***58***	***54***				***67***	***63***				***54***	***50***				***61***	***57***				***75***	***71***				***67***	***63***		
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	56	52	55	0	1650	45	41	44	5	850	50	46	49	5	450	61	57	60	0	815	56	52	55	0
Grader	1	85	40%	380	57	53	56	10	430	66	62	65	0	1250	52	48	51	5	510	60	56	59	5	175	74	70	73	0	470	66	62	65	0
Grading					***63***	***59***				***72***	***68***				***59***	***54***				***66***	***62***				***80***	***76***				***72***	***67***		
Tractor/Loader/Backhoe	1	80	40%	380	52	48	51	10	430	61	57	60	0	1250	47	43	46	5	510	55	51	54	5	175	69	65	68	0	470	61	57	60	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Excavator	1	85	40%	380	57	53	56	10	430	66	62	65	0	1250	52	48	51	5	510	60	56	59	5	175	74	70	73	0	470	66	62	65	0
Excavator	1	85	40%	380	57	53	56	10	430	66	62	65	0	1250	52	48	51	5	510	60	56	59	5	175	74	70	73	0	470	66	62	65	0
Dump Truck	1	84	40%	380	56	52	55	10	430	65	61	64	0	1250	51	47	50	5	510	59	55	58	5	175	73	69	72	0	470	65	61	64	0
Vacuum Street Sweeper	1	80	10%	720	47	37	40	10	775	56	46	49	0	1650	45	35	38	5	850	50	40	43	5	450	61	51	54	0	815	56	46	49	0
Compactor (ground)	1	80	20%	520	50	43	46	10	600	58	51	54	0	1450	46	39	42	5	650	53	46	49	5	300	64	57	60	0	640	58	51	54	0
Vacuum Street Sweeper	1	80	10%	720	47	37	40	10	775	56	46	49	0	1650	45	35	38	5	850	50	40	43	5	450	61	51	54	0	815	56	46	49	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Foundations/Concrete Pour					***66***	***59***				***75***	***68***				***61***	***54***				***68***	***62***				***82***	***76***				***74***	***67***		
Auger Drill Rig	1	85	20%	380	57	50	53	10	430	66	59	62	0	1250	52	45	48	5	510	60	53	56	5	175	74	67	70	0	470	66	59	62	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Crane	1	85	16%	380	57	49	52	10	430	66	58	61	0	1250	52	44	47	5	510	60	52	55	5	175	74	66	69	0	470	66	58	61	0
Crane	1	85	16%	520	55	47	50	10	600	63	55	58	0	1450	51	43	46	5	650	58	50	53	5	300	69	61	64	0	640	63	55	58	0
Dump Truck	1	84	40%	380	56	52	55	10	430	65	61	64	0	1250	51	47	50	5	510	59	55	58	5	175	73	69	72	0	470	65	61	64	0
Pumps	1	77	50%	520	47	44	47	10	600	55	52	55	0	1450	43	40	43	5	650	50	47	50	5	300	61	58	61	0	640	55	52	55	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Compactor (ground)	1	80	20%	520	50	43	46	10	600	58	51	54	0	1450	46	39	42	5	650	53	46	49	5	300	64	57	60	0	640	58	51	54	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Welder	1	73	40%	720	40	36	39	10	775	49	45	48	0	1650	38	34	37	5	850	43	39	42	5	450	54	50	53	0	815	49	45	48	0
Building 1 Construction					***68***	***62***				***77***	***71***				***63***	***57***				***71***	***64***				***85***	***78***				***76***	***70***		
Man Lift	1	85	20%	380	57	50	53	10	430	66	59	62	0	1250	52	45	48	5	510	60	53	56	5	175	74	67	70	0	470	66	59	62	0
Man Lift	1	85	20%	520	55	48	51	10	600	63	56	59	0	1450	51	44	47	5	650	58	51	54	5	300	69	62	65	0	640	63	56	59	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Crane	1	85	16%	520	55	47	50	10	600	63	55	58	0	1450	51	43	46	5	650	58	50	53	5	300	69	61	64	0	640	63	55	58	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Dump Truck	1	84	40%	380	56	52	55	10	430	65	61	64	0	1250	51	47	50	5	510	59	55	58	5	175	73	69	72	0	470	65	61	64	0
Dump Truck	1	84	40%	380	56	52	55	10	430	65	61	64	0	1250	51	47	50	5	510	59	55	58	5	175	73	69	72	0	470	65	61	64	0
Pumps	1	77	50%	520	47	44	47	10	600	55	52	55	0	1450	43	40	43	5	650	50	47	50	5	300	61	58	61	0	640	55	52	55	0
Pumps	1	77	50%	720	44	41	44	10	775	53	50	53	0	1650	42	39	42	5	850	47	44	47	5	450	58	55	58	0	815	53	50	53	0
Roller	1	85	20%	380	57	50	53	10	430	66	59	62	0	1250	52	45	48	5	510	60	53	56	5	175	74	67	70	0	470	66	59	62	0
Roller	1	85	20%	520	55	48	51	10	600	63	56	59	0	1450	51	44	47	5	650	58	51	54	5	300	69	62	65	0	640	63	56	59	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0

D - North				R1					R2					R3					R4					R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Building 1 Arch Coating					***52***	***48***				***61***	***57***				***47***	***43***				***55***	***51***				***69***	***65***				***61***	***57***		
Compressor (air)	1	80	40%	380	52	48	51	10	430	61	57	60	0	1250	47	43	46	5	510	55	51	54	5	175	69	65	68	0	470	61	57	60	0
Building 2 Construction					***70***	***64***				***79***	***73***				***65***	***59***				***73***	***66***				***87***	***80***				***79***	***72***		
Man Lift	1	85	20%	520	55	48	51	10	600	63	56	59	0	1450	51	44	47	5	650	58	51	54	5	300	69	62	65	0	640	63	56	59	0
Man Lift	1	85	20%	520	55	48	51	10	600	63	56	59	0	1450	51	44	47	5	650	58	51	54	5	300	69	62	65	0	640	63	56	59	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Crane	1	85	16%	520	55	47	50	10	600	63	55	58	0	1450	51	43	46	5	650	58	50	53	5	300	69	61	64	0	640	63	55	58	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0
Grader	1	85	40%	380	57	53	56	10	430	66	62	65	0	1250	52	48	51	5	510	60	56	59	5	175	74	70	73	0	470	66	62	65	0
Grader	1	85	40%	520	55	51	54	10	600	63	59	62	0	1450	51	47	50	5	650	58	54	57	5	300	69	65	68	0	640	63	59	62	0
Dump Truck	1	84	40%	520	54	50	53	10	600	62	58	61	0	1450	50	46	49	5	650	57	53	56	5	300	68	64	67	0	640	62	58	61	0
Pumps	1	77	50%	720	44	41	44	10	775	53	50	53	0	1650	42	39	42	5	850	47	44	47	5	450	58	55	58	0	815	53	50	53	0
Pumps	1	77	50%	720	44	41	44	10	775	53	50	53	0	1650	42	39	42	5	850	47	44	47	5	450	58	55	58	0	815	53	50	53	0
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	58	54	57	0	1450	46	42	45	5	650	53	49	52	5	300	64	60	63	0	640	58	54	57	0
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	56	52	55	0	1650	45	41	44	5	850	50	46	49	5	450	61	57	60	0	815	56	52	55	0
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	56	52	55	0	1650	45	41	44	5	850	50	46	49	5	450	61	57	60	0	815	56	52	55	0
Building 2 Arch Coating					***47***	***43***				***56***	***52***				***45***	***41***				***50***	***46***				***61***	***57***				***56***	***52***		
Compressor (air)	1	80	40%	720	47	43	46	10	775	56	52	55	0	1650	45	41	44	5	850	50	46	49	5	450	61	57	60	0	815	56	52	55	0
Paving					***65***	***61***				***74***	***70***				***60***	***56***				***68***	***63***				***82***	***77***				***74***	***69***		
Drum Mixer	1	80	50%	520	50	47	50	10	600	58	55	58	0	1450	46	43	46	5	650	53	50	53	5	300	64	61	64	0	640	58	55	58	0
Concrete Saw	1	90	20%	380	62	55	58	10	430	71	64	67	0	1250	57	50	53	5	510	65	58	61	5	175	79	72	75	0	470	71	64	67	0
Dump Truck	1	84	40%	520	54	50	53	10	600	62	58	61	0	1450	50	46	49	5	650	57	53	56	5	300	68	64	67	0	640	62	58	61	0
Paver	1	85	50%	380	57	54	57	10	430	66	63	66	0	1250	52	49	52	5	510	60	57	60	5	175	74	71	74	0	470	66	63	66	0
Other Equipment	1	85	50%	380	57	54	57	10	430	66	63	66	0	1250	52	49	52	5	510	60	57	60	5	175	74	71	74	0	470	66	63	66	0
Other Equipment	1	85	50%	520	55	52	55	10	600	63	60	63	0	1450	51	48	51	5	650	58	55	58	5	300	69	66	69	0	640	63	60	63	0
Pumps	1	77	50%	720	44	41	44	10	775	53	50	53	0	1650	42	39	42	5	850	47	44	47	5	450	58	55	58	0	815	53	50	53	0
Forklift	1	75	10%	720	42	32	35	10	775	51	41	44	0	1650	40	30	33	5	850	45	35	38	5	450	56	46	49	0	815	51	41	44	0

Fourth & Central EIR
On-Site Construction Noise Summary - Mitigated

Construction Phase	A - Upper South						B - Lower South						C - West						D - North					
	R1	R2	R3	R4	R5	R6	R1	R2	R3	R4	R5	R6	R1	R2	R3	R4	R5	R6	R1	R2	R3	R4	R5	R6
Demolition	57.2	63.8	47.5	56.8	64.5	55.6	54.4	47.4	56.1	56.7	53.1	43.3	51.0	62.3	43.4	59.9	60.2	42.0	62.6	68.5	44.6	52.2	66.0	57.8
Site Preparation	49.8	56.3	40.7	49.1	56.7	48.6	47.1	40.1	48.6	48.6	45.4	36.1	51.0	62.3	43.4	59.9	59.9	42.0	54.4	60.3	36.6	44.0	57.8	49.6
Grading	53.3	60.0	43.7	53.0	60.7	51.8	50.5	43.5	52.3	53.0	49.3	39.5	49.9	61.2	42.3	58.4	58.8	40.8	59.1	65.1	41.1	48.7	62.6	54.3
Parking Garage Construction	54.2	60.8	44.4	53.8	61.5	52.5	51.4	44.4	53.2	53.8	50.1	40.3												
Foundations/Concrete Pour	57.5	63.8	47.4	56.8	64.5	55.5	57.9	50.9	59.4	60.1	56.3	46.5	57.0	68.3	49.4	65.4	65.8	47.9	58.6	64.5	40.5	48.1	62.0	53.7
Building 1 Construction																			61.8	67.7	43.7	51.3	65.2	56.9
Building 1 Arch Coating																			23.4	29.3	5.1	12.8	27.1	18.6
Building 2 Construction																			63.8	69.7	45.8	53.4	67.2	59.0
Building 2 Arch Coating																			17.9	24.2	2.7	8.4	18.9	13.8
Building 3 Construction	54.2	60.8	44.5	53.8	61.6	52.6																		
Building 3 Arch Coating	45.2	26.6	11.4	19.3	26.9	19.1																		
Building 4 Construction	54.2	60.8	44.5	53.8	61.6	52.6																		
Building 4 Arch Coating	44.5	26.1	10.3	19.0	26.6	18.3																		
Building 5 Construction	54.2	60.8	44.4	53.8	61.5	52.5																		
Building 5 Arch Coating	43.2	25.0	8.0	18.2	26.0	16.4																		
Building 6 Construction							55.5	48.5	57.3	58.0	54.2	44.4												
Building 6 Arch Coating							40.0	33.0	17.0	18.2	14.1	4.0												
Building 7 Construction							51.4	44.4	51.0	53.8	50.1	40.3												
Building 7 Arch Coating							40.0	33.0	17.0	18.2	14.1	4.0												
Building 8 Construction							51.4	44.4	53.2	53.8	50.1	40.3												
Building 8 Arch Coating							40.0	33.0	17.0	18.2	14.1	4.0												
Building 9 Construction							51.4	44.4	53.2	53.8	50.1	40.3												
Building 9 Arch Coating							51.4	44.4	53.2	53.8	50.1	40.3												
Building 10 Construction													53.9	65.2	46.3	61.8	62.4	44.7						
Building 10 Arch Coating													52.8	64.1	45.2	61.2	61.6	43.7						
Paving	55.2	61.7	45.4	54.7	62.4	53.6	52.5	45.5	54.1	54.6	51.0	41.3	54.3	65.6	46.7	62.4	62.9	45.2	60.5	66.4	42.6	50.1	63.9	55.7
Demolition + Site Preparation	57.9	64.5	48.3	57.5	65.2	56.4	55.1	48.1	56.9	57.4	53.8	44.1	54.0	65.3	46.4	62.9	63.1	45.0	63.2	69.1	45.2	52.8	66.6	58.4
Below Grade Parking + Parking Garage Const	56.8	63.4	47.0	56.4	64.2	55.2	54.0	47.0	55.8	56.4	52.7	43.0												
Demolition + Site Preparation + Below Grade Parking													55.4	66.7	47.8	64.2	64.4	46.4						
Building 1/2 Construction	65.9	71.8	47.9	55.5	69.4	61.1																		
Building 1 Construction + Building 1 Arch Coati	65.9	71.8	47.9	55.5	69.4	61.1																		
Building 2 Construction + Arch Coating + Pavir	65.5	71.4	47.5	55.1	68.9	60.7																		
Building 3/4/5 Construction	59.0	65.6	49.2	58.6	66.3	57.4																		
Building 3/4/5 Construction + Building 3/4 Arch	59.3	65.6	49.2	58.6	66.3	57.4																		
Building 5 Construction + Arch Coating + Pavir	57.9	64.3	47.9	57.3	65.0	56.1																		
Building 6/7/8/9 Construction+ Arch Coating	59.7	52.7	61.1	62.0	58.3	48.5																		
Building 6/7/8/9 Construction+ Arch Coating +	60.5	53.5	61.9	62.7	59.1	49.3																		
Building 10 Construction + Paving	57.1	68.4	49.5	65.1	65.7	48.0																		
Building 10 Construction + Arch Coating	56.4	67.7	48.8	64.5	65.1	47.2																		
Overlapping Phases	67.7	73.5	61.7	66.2	71.9	62.9																		
Maximum Noise Level	**67.7**	**73.5**	**61.9**	**66.2**	**71.9**	**62.9**																		

Site	**R1**	**R2**	**R3**	**R4**	**R5**	**R6**
A - Upper South	59.3	65.6	49.2	58.6	66.3	57.4
B - Lower South	60.5	53.5	61.9	62.7	59.1	49.3
C - West	57.1	68.4	49.5	65.1	65.7	48.0
D - North	65.9	71.8	47.9	55.5	69.4	61.1
Maximum Overlapping Noise Level	68.1	**74.1**	**62.5**	**67.9**	**72.4**	**63.0**
Ambient Daytime Noise Level	67.7	70.5	58.5	70.2	69.7	66.7
Threshold (Ambent + 5 dbA)	72.7	75.5	63.5	75.2	74.7	71.7
Exceeds Threshold?	No	No	No	No	No	No

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

ESA

Parameters

Leq to L10 factor	3

A - Upper South - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition					***63***	***57***				***69***	***64***				***53***	***47***				***62***	***57***				***70***	***65***				***61***	***56***		
Compressor (Air)	1	80	40%	1160	43	39	42	10	475	23	19	22	37	1065	10	6	9	43	635	15	11	14	43	500	22	18	21	38	830	18	14	17	38
Man Lift	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	48	44	47	12	1065	35	31	34	18	635	40	36	39	18	500	47	43	46	13	830	43	39	42	13
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	46	42	45	12	1265	34	30	33	18	850	37	33	36	18	700	44	40	43	13	1030	41	37	40	13
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	46	42	45	12	1265	34	30	33	18	850	37	33	36	18	700	44	40	43	13	1030	41	37	40	13
Other Equipment	1	85	50%	690	52	49	52	10	250	59	56	59	12	890	42	39	42	18	275	52	49	52	18	200	60	57	60	13	600	50	47	50	13
Other Equipment	1	85	50%	690	52	49	52	10	250	59	56	59	12	890	42	39	42	18	275	52	49	52	18	200	60	57	60	13	600	50	47	50	13
Excavator	1	85	40%	690	52	48	51	10	250	59	55	58	12	890	42	38	41	18	275	52	48	51	18	200	60	56	59	13	600	50	46	49	13
Excavator	1	85	40%	1160	48	44	47	10	475	53	49	52	12	1065	40	36	39	18	635	45	41	44	18	500	52	48	51	13	830	48	44	47	13
Dump Truck	1	84	40%	1160	47	43	46	10	475	52	48	51	12	1065	39	35	38	18	635	44	40	43	18	500	51	47	50	13	830	47	43	46	13
Vacuum Street Sweeper	1	80	10%	1460	41	31	34	10	650	46	36	39	12	1265	34	24	27	18	850	37	27	30	18	700	44	34	37	13	1030	41	31	34	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Site Preparation					***54***	***50***				***60***	***56***				***45***	***41***				***53***	***49***				***61***	***57***				***53***	***49***		
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	46	42	45	12	1265	34	30	33	18	850	37	33	36	18	700	44	40	43	13	1030	41	37	40	13
Grader	1	85	40%	690	52	48	51	10	250	59	55	58	12	890	42	38	41	18	275	52	48	51	18	200	60	56	59	13	600	50	46	49	13
Scraper	1	85	40%	1160	48	44	47	10	475	53	49	52	12	1065	40	36	39	18	635	45	41	44	18	500	52	48	51	13	830	48	44	47	13
Grading					***57***	***53***				***64***	***60***				***48***	***44***				***57***	***53***				***65***	***61***				***56***	***52***		
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	48	44	47	12	1065	35	31	34	18	635	40	36	39	18	500	47	43	46	13	830	43	39	42	13
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	48	44	47	12	1065	35	31	34	18	635	40	36	39	18	500	47	43	46	13	830	43	39	42	13
Tractor/Loader/Backhoe	1	80	40%	1160	43	39	42	10	475	48	44	47	12	1065	35	31	34	18	635	40	36	39	18	500	47	43	46	13	830	43	39	42	13
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	46	42	45	12	1265	34	30	33	18	850	37	33	36	18	700	44	40	43	13	1030	41	37	40	13
Excavator	1	85	40%	690	52	48	51	10	250	59	55	58	12	890	42	38	41	18	275	52	48	51	18	200	60	56	59	13	600	50	46	49	13
Excavator	1	85	40%	690	52	48	51	10	250	59	55	58	12	890	42	38	41	18	275	52	48	51	18	200	60	56	59	13	600	50	46	49	13
Dump Truck	1	84	40%	690	51	47	50	10	250	58	54	57	12	890	41	37	40	18	275	51	47	50	18	200	59	55	58	13	600	49	45	48	13
Vacuum Street Sweeper	1	80	10%	1460	41	31	34	10	650	46	36	39	12	1265	34	24	27	18	850	37	27	30	18	700	44	34	37	13	1030	41	31	34	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Parking Garage Construction					***61***	***54***				***67***	***61***				***51***	***44***				***60***	***54***				***68***	***62***				***59***	***53***		
Man Lift	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Crane	1	85	16%	1160	48	40	43	10	475	53	45	48	12	1065	40	32	35	18	635	45	37	40	18	500	52	44	47	13	830	48	40	43	13
Crane	1	85	16%	1160	48	40	43	10	475	53	45	48	12	1065	40	32	35	18	635	45	37	40	18	500	52	44	47	13	830	48	40	43	13
Dump Truck	1	84	40%	690	51	47	50	10	250	58	54	57	12	890	41	37	40	18	275	51	47	50	18	200	59	55	58	13	600	49	45	48	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Pumps	1	77	50%	1160	40	37	40	10	475	20	17	20	37	1065	7	4	7	43	635	12	9	12	43	500	19	16	19	38	830	15	12	15	38
Pumps	1	77	50%	1460	38	35	38	10	650	18	15	18	37	1265	6	3	6	43	850	9	6	9	43	700	16	13	16	38	1030	13	10	13	38
Roller	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Foundations/Concrete Pour					***64***	***58***				***70***	***64***				***54***	***47***				***63***	***57***				***71***	***65***				***62***	***56***		
Tractor/Loader/Backhoe	1	80	40%	1460	41	37	40	10	650	46	42	45	12	1265	34	30	33	18	850	37	33	36	18	700	44	40	43	13	1030	41	37	40	13
Auger Drill Rig	1	85	20%	690	52	45	48	10	250	34	27	30	37	890	17	10	13	43	275	27	20	23	43	200	35	28	31	38	600	25	18	21	38
Auger Drill Rig	1	85	20%	1160	48	41	44	10	475	28	21	24	37	1065	15	8	11	43	635	20	13	16	43	500	27	20	23	38	830	23	16	19	38
Auger Drill Rig	1	85	20%	1160	48	41	44	10	475	28	21	24	37	1065	15	8	11	43	635	20	13	16	43	500	27	20	23	38	830	23	16	19	38
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Crane	1	85	16%	1160	48	40	43	10	475	53	45	48	12	1065	40	32	35	18	635	45	37	40	18	500	52	44	47	13	830	48	40	43	13
Crane	1	85	16%	1460	46	38	41	10	650	51	43	46	12	1265	39	31	34	18	850	42	34	37	18	700	49	41	44	13	1030	46	38	41	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Grader	1	85	40%	690	52	48	51	10	250	59	55	58	12	890	42	38	41	18	275	52	48	51	18	200	60	56	59	13	600	50	46	49	13
Grader	1	85	40%	690	52	48	51	10	250	59	55	58	12	890	42	38	41	18	275	52	48	51	18	200	60	56	59	13	600	50	46	49	13
Pumps	1	77	50%	1460	38	35	38	10	650	43	40	43	12	1265	31	28	31	18	850	34	31	34	18	700	41	38	41	13	1030	38	35	38	13
Pumps	1	77	50%	1460	38	35	38	10	650	43	40	43	12	1265	31	28	31	18	850	34	31	34	18	700	41	38	41	13	1030	38	35	38	13
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13

A - Upper South - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Building 3 Construction					***61***	***54***				***67***	***61***				***51***	***44***				***60***	***54***				***68***	***62***				***59***	***53***		
Man Lift	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Man Lift	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Crane	1	85	16%	1160	48	40	43	10	475	53	45	48	12	1065	40	32	35	18	635	45	37	40	18	500	52	44	47	13	830	48	40	43	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Dump Truck	1	84	40%	690	51	47	50	10	250	58	54	57	12	890	41	37	40	18	275	51	47	50	18	200	59	55	58	13	600	49	45	48	13
Pumps	1	77	50%	1160	40	37	40	10	475	20	17	20	37	1065	7	4	7	43	635	12	9	12	43	500	19	16	19	38	830	15	12	15	38
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Welder	1	73	40%	1460	34	30	33	10	650	39	35	38	12	1265	27	23	26	18	850	30	26	29	18	700	37	33	36	13	1030	34	30	33	13
Welder	1	73	40%	1460	34	30	33	10	650	39	35	38	12	1265	27	23	26	18	850	30	26	29	18	700	37	33	36	13	1030	34	30	33	13
Building 3 Arch Coating					***49***	***45***				***31***	***27***				***15***	***11***				***23***	***19***				***31***	***27***				***23***	***19***		
Compressor (air)	1	80	40%	690	47	43	46	10	250	29	25	28	37	890	12	8	11	43	275	22	18	21	43	200	30	26	29	38	600	20	16	19	38
Compressor (air)	1	80	40%	1160	43	39	42	10	475	23	19	22	37	1065	10	6	9	43	635	15	11	14	43	500	22	18	21	38	830	18	14	17	38
Compressor (air)	1	80	40%	1460	41	37	40	10	650	21	17	20	37	1265	9	5	8	43	850	12	8	11	43	700	19	15	18	38	1030	16	12	15	38
Building 4 Construction					***61***	***54***				***67***	***61***				***51***	***44***				***60***	***54***				***68***	***62***				***59***	***53***		
Man Lift	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Man Lift	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Crane	1	85	16%	1160	48	40	43	10	475	53	45	48	12	1065	40	32	35	18	635	45	37	40	18	500	52	44	47	13	830	48	40	43	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Dump Truck	1	84	40%	690	51	47	50	10	250	58	54	57	12	890	41	37	40	18	275	51	47	50	18	200	59	55	58	13	600	49	45	48	13
Pumps	1	77	50%	1160	40	37	40	10	475	20	17	20	37	1065	7	4	7	43	635	12	9	12	43	500	19	16	19	38	830	15	12	15	38
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Welder	1	73	40%	1460	34	30	33	10	650	39	35	38	12	1265	27	23	26	18	850	30	26	29	18	700	37	33	36	13	1030	34	30	33	13
Welder	1	73	40%	1460	34	30	33	10	650	39	35	38	12	1265	27	23	26	18	850	30	26	29	18	700	37	33	36	13	1030	34	30	33	13
Building 4 Arch Coating					***49***	***45***				***30***	***26***				***14***	***10***				***23***	***19***				***31***	***27***				***22***	***18***		
Compressor (air)	1	80	40%	690	47	43	46	10	250	29	25	28	37	890	12	8	11	43	275	22	18	21	43	200	30	26	29	38	600	20	16	19	38
Compressor (air)	1	80	40%	1160	43	39	42	10	475	23	19	22	37	1065	10	6	9	43	635	15	11	14	43	500	22	18	21	38	830	18	14	17	38
Building 5 Construction					***61***	***54***				***67***	***61***				***51***	***44***				***60***	***54***				***68***	***62***				***59***	***53***		
Man Lift	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Crane	1	85	16%	1160	48	40	43	10	475	53	45	48	12	1065	40	32	35	18	635	45	37	40	18	500	52	44	47	13	830	48	40	43	13
Crane	1	85	16%	1160	48	40	43	10	475	53	45	48	12	1065	40	32	35	18	635	45	37	40	18	500	52	44	47	13	830	48	40	43	13
Dump Truck	1	84	40%	690	51	47	50	10	250	58	54	57	12	890	41	37	40	18	275	51	47	50	18	200	59	55	58	13	600	49	45	48	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13
Pumps	1	77	50%	1160	40	37	40	10	475	20	17	20	37	1065	7	4	7	43	635	12	9	12	43	500	19	16	19	38	830	15	12	15	38
Pumps	1	77	50%	1460	38	35	38	10	650	18	15	18	37	1265	6	3	6	43	850	9	6	9	43	700	16	13	16	38	1030	13	10	13	38
Roller	1	85	20%	690	52	45	48	10	250	59	52	55	12	890	42	35	38	18	275	52	45	48	18	200	60	53	56	13	600	50	43	46	13
Roller	1	85	20%	1160	48	41	44	10	475	53	46	49	12	1065	40	33	36	18	635	45	38	41	18	500	52	45	48	13	830	48	41	44	13
Building 5 Arch Coating					***47***	***43***				***29***	***25***				***12***	***8***				***22***	***18***				***30***	***26***				***20***	***16***		
Compressor (air)	1	80	40%	690	47	43	46	10	250	29	25	28	37	890	12	8	11	43	275	22	18	21	43	200	30	26	29	38	600	20	16	19	38
Paving					***60***	***55***				***67***	***62***				***50***	***45***				***60***	***55***				***67***	***62***				***58***	***54***		
Drum Mixer	1	80	50%	1160	43	40	43	10	475	23	20	23	37	1065	10	7	10	43	635	15	12	15	43	500	22	19	22	38	830	18	15	18	38
Concrete Saw	1	90	20%	690	57	50	53	10	250	64	57	60	12	890	47	40	43	18	275	57	50	53	18	200	65	58	61	13	600	55	48	51	13
Dump Truck	1	84	40%	1160	47	43	46	10	475	52	48	51	12	1065	39	35	38	18	635	44	40	43	18	500	51	47	50	13	830	47	43	46	13
Paver	1	85	50%	690	52	49	52	10	250	59	56	59	12	890	42	39	42	18	275	52	49	52	18	200	60	57	60	13	600	50	47	50	13
Other Equipment	1	85	50%	690	52	49	52	10	250	59	56	59	12	890	42	39	42	18	275	52	49	52	18	200	60	57	60	13	600	50	47	50	13
Other Equipment	1	85	50%	1160	48	45	48	10	475	53	50	53	12	1065	40	37	40	18	635	45	42	45	18	500	52	49	52	13	830	48	45	48	13
Pumps	1	77	50%	1460	38	35	38	10	650	18	15	18	37	1265	6	3	6	43	850	9	6	9	43	700	16	13	16	38	1030	13	10	13	38
Forklift	1	75	10%	1460	36	26	29	10	650	41	31	34	12	1265	29	19	22	18	850	32	22	25	18	700	39	29	32	13	1030	36	26	29	13

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

ESA

Parameters

Leq to L10 factor	3

B - Lower South - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition					***60***	***54***				***53***	***47***				***61***	***56***				***62***	***57***				***58***	***53***				***49***	***43***			
Compressor (Air)	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	18	14	17	38	700	14	10	13	43	700	14	10	13	43	1010	6	2	5	48
Man Lift	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1500	40	36	39	10	1500	33	29	32	17	1010	41	37	40	13	900	37	33	36	18	900	37	33	36	18	1210	29	25	28	23
Tractor/Loader/Backhoe	1	80	40%	1500	40	36	39	10	1500	33	29	32	17	1010	41	37	40	13	900	37	33	36	18	900	37	33	36	18	1210	29	25	28	23
Other Equipment	1	85	50%	1000	49	46	49	10	1000	42	39	42	17	560	51	48	51	13	275	52	49	52	18	440	48	45	48	18	795	38	35	38	23
Other Equipment	1	85	50%	1000	49	46	49	10	1000	42	39	42	17	560	51	48	51	13	275	52	49	52	18	440	48	45	48	18	795	38	35	38	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Excavator	1	85	40%	1300	47	43	46	10	1300	40	36	39	17	810	48	44	47	13	700	44	40	43	18	700	44	40	43	18	1010	36	32	35	23
Dump Truck	1	84	40%	1300	46	42	45	10	1300	39	35	38	17	810	47	43	46	13	700	43	39	42	18	700	43	39	42	18	1010	35	31	34	23
Vacuum Street Sweeper	1	80	10%	1500	40	30	33	10	1500	33	23	26	17	1010	41	31	34	13	900	37	27	30	18	900	37	27	30	18	1210	29	19	22	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Site Preparation					***51***	***47***				***44***	***40***				***53***	***49***				***53***	***49***				***49***	***45***				***40***	***36***			
Tractor/Loader/Backhoe	3	80	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Tractor/Loader/Backhoe	2	80	40%	1300	45	41	44	10	1300	38	34	37	17	810	46	42	45	13	700	42	38	41	18	700	42	38	41	18	1010	34	30	33	23
Tractor/Loader/Backhoe	2	80	40%	1500	43	39	42	10	1500	36	32	35	17	1010	44	40	43	13	900	40	36	39	18	900	40	36	39	18	1210	32	28	31	23
Grading					***55***	***50***				***48***	***43***				***56***	***52***				***57***	***53***				***53***	***49***				***44***	***40***			
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1500	40	36	39	10	1500	33	29	32	17	1010	41	37	40	13	900	37	33	36	18	900	37	33	36	18	1210	29	25	28	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Dump Truck	1	84	40%	1000	48	44	47	10	1000	41	37	40	17	560	50	46	49	13	275	51	47	50	18	440	47	43	46	18	795	37	33	36	23
Vacuum Street Sweeper	1	80	10%	1500	40	30	33	10	1500	33	23	26	17	1010	41	31	34	13	900	37	27	30	18	900	37	27	30	18	1210	29	19	22	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Parking Garage Construction					***58***	***51***				***51***	***44***				***60***	***53***				***60***	***54***				***57***	***50***				***47***	***40***			
Man Lift	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Man Lift	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Crane	1	85	16%	1300	47	39	42	10	1300	40	32	35	17	810	48	40	43	13	700	44	36	39	18	700	44	36	39	18	1010	36	28	31	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Dump Truck	1	84	40%	1000	48	44	47	10	1000	41	37	40	17	560	50	46	49	13	275	51	47	50	18	440	47	43	46	18	795	37	33	36	23
Pumps	1	77	50%	1300	39	36	39	10	1300	32	29	32	17	810	15	12	15	38	700	11	8	11	43	700	11	8	11	43	1010	3	0	3	48
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23

B - Lower South - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Foundations/Concrete Pour					***63***	***58***				***56***	***51***				***65***	***59***				***65***	***60***				***62***	***56***				***52***	***47***		
Auger Drill Rig	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	23	16	19	38	700	19	12	15	43	700	19	12	15	43	1010	11	4	7	48
Auger Drill Rig	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	23	16	19	38	700	19	12	15	43	700	19	12	15	43	1010	11	4	7	48
Auger Drill Rig	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	23	16	19	38	700	19	12	15	43	700	19	12	15	43	1010	11	4	7	48
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1300	42	38	41	10	1300	35	31	34	17	810	43	39	42	13	700	39	35	38	18	700	39	35	38	18	1010	31	27	30	23
Tractor/Loader/Backhoe	1	80	40%	1000	44	40	43	10	1000	37	33	36	17	1000	41	37	40	13	1000	36	32	35	18	1000	36	32	35	18	1000	31	27	30	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Excavator	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Forklift	1	75	10%	1000	39	29	32	10	1000	32	22	25	17	1000	36	26	29	13	1000	31	21	24	18	1000	31	21	24	18	1000	26	16	19	23
Forklift	1	75	10%	1000	39	29	32	10	1000	32	22	25	17	1000	36	26	29	13	1000	31	21	24	18	1000	31	21	24	18	1000	26	16	19	23
Forklift	1	75	10%	1000	39	29	32	10	1000	32	22	25	17	1000	36	26	29	13	1000	31	21	24	18	1000	31	21	24	18	1000	26	16	19	23
Forklift	1	75	10%	1000	39	29	32	10	1000	32	22	25	17	1000	36	26	29	13	1000	31	21	24	18	1000	31	21	24	18	1000	26	16	19	23
Forklift	1	75	10%	1000	39	29	32	10	1000	32	22	25	17	1000	36	26	29	13	1000	31	21	24	18	1000	31	21	24	18	1000	26	16	19	23
Grader	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Grader	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Grader	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Grader	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Dump Truck	1	84	40%	1000	48	44	47	10	1000	41	37	40	17	560	50	46	49	13	275	51	47	50	18	440	47	43	46	18	795	37	33	36	23
Dump Truck	1	84	40%	1300	46	42	45	10	1300	39	35	38	17	810	47	43	46	13	700	43	39	42	18	700	43	39	42	18	1010	35	31	34	23
Dump Truck	1	84	40%	1300	46	42	45	10	1300	39	35	38	17	810	47	43	46	13	700	43	39	42	18	700	43	39	42	18	1010	35	31	34	23
Pumps	1	77	50%	1000	41	38	41	10	1000	34	31	34	17	1000	13	10	13	38	1000	8	5	8	43	1000	8	5	8	43	1000	3	0	3	48
Pumps	1	77	50%	1000	41	38	41	10	1000	34	31	34	17	1000	13	10	13	38	1000	8	5	8	43	1000	8	5	8	43	1000	3	0	3	48
Pumps	1	77	50%	1000	41	38	41	10	1000	34	31	34	17	1000	13	10	13	38	1000	8	5	8	43	1000	8	5	8	43	1000	3	0	3	48
Compactor (ground)	1	80	20%	1000	44	37	40	10	1000	37	30	33	17	1000	41	34	37	13	1000	36	29	32	18	1000	36	29	32	18	1000	31	24	27	23
Compactor (ground)	1	80	20%	1000	44	37	40	10	1000	37	30	33	17	1000	41	34	37	13	1000	36	29	32	18	1000	36	29	32	18	1000	31	24	27	23
Compactor (ground)	1	80	20%	1000	44	37	40	10	1000	37	30	33	17	1000	41	34	37	13	1000	36	29	32	18	1000	36	29	32	18	1000	31	24	27	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Building 6 Construction					***62***	***55***				***55***	***48***				***64***	***57***				***65***	***58***				***61***	***54***				***51***	***44***		
Man Lift	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Man Lift	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Crane	1	85	16%	1300	47	39	42	10	1300	40	32	35	17	810	48	40	43	13	700	44	36	39	18	700	44	36	39	18	1010	36	28	31	23
Crane	1	85	16%	1500	45	37	40	10	1500	38	30	33	17	1010	46	38	41	13	900	42	34	37	18	900	42	34	37	18	1210	34	26	29	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Grader	1	85	40%	1000	49	45	48	10	1000	42	38	41	17	560	51	47	50	13	275	52	48	51	18	440	48	44	47	18	795	38	34	37	23
Grader	1	85	40%	1300	47	43	46	10	1300	40	36	39	17	810	48	44	47	13	700	44	40	43	18	700	44	40	43	18	1010	36	32	35	23
Dump Truck	1	84	40%	1300	46	42	45	10	1300	39	35	38	17	810	47	43	46	13	700	43	39	42	18	700	43	39	42	18	1010	35	31	34	23
Pumps	1	77	50%	1500	37	34	37	10	1500	30	27	30	17	1010	13	10	13	38	900	9	6	9	43	900	9	6	9	43	1210	1	-2	1	48
Pumps	1	77	50%	1500	37	34	37	10	1500	30	27	30	17	1010	13	10	13	38	900	9	6	9	43	900	9	6	9	43	1210	1	-2	1	48
Building 6 Arch Coating					***44***	***40***				***37***	***33***				***21***	***17***				***22***	***18***				***18***	***14***				***8***	***4***		
Compressor (air)	1	80	40%	1000	44	40	43	10	1000	37	33	36	17	560	21	17	20	38	275	22	18	21	43	440	18	14	17	43	795	8	4	7	48

B - Lower South - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Building 7 Construction					***58***	***51***				***51***	***44***				***58***	***51***				***60***	***54***				***57***	***50***				***47***	***40***		
Man Lift	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Man Lift	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Crane	1	85	16%	1300	47	39	42	10	1300	40	32	35	17	810	48	40	43	13	700	44	36	39	18	700	44	36	39	18	1010	36	28	31	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Dump Truck	1	84	40%	1000	48	44	47	10	1000	41	37	40	17	560	50	46	49	13	275	51	47	50	18	440	47	43	46	18	795	37	33	36	23
Pumps	1	77	50%	1300	39	36	39	10	1300	32	29	32	17	810	15	12	15	38	700	11	8	11	43	700	11	8	11	43	1010	3	0	3	48
Roller	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23
Building 7 Arch Coating					***44***	***40***				***37***	***33***				***21***	***17***				***22***	***18***				***18***	***14***				***8***	***4***		
Compressor (air)	1	80	40%	1000	44	40	43	10	1000	37	33	36	17	560	21	17	20	38	275	22	18	21	43	440	18	14	17	43	795	8	4	7	48
Building 8 Construction					***58***	***51***				***51***	***44***				***60***	***53***				***60***	***54***				***57***	***50***				***47***	***40***		
Man Lift	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Man Lift	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Crane	1	85	16%	1300	47	39	42	10	1300	40	32	35	17	810	48	40	43	13	700	44	36	39	18	700	44	36	39	18	1010	36	28	31	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Dump Truck	1	84	40%	1000	48	44	47	10	1000	41	37	40	17	560	50	46	49	13	275	51	47	50	18	440	47	43	46	18	795	37	33	36	23
Pumps	1	77	50%	1300	39	36	39	10	1300	32	29	32	17	810	15	12	15	38	700	11	8	11	43	700	11	8	11	43	1010	3	0	3	48
Roller	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23
Building 8 Arch Coating					***44***	***40***				***37***	***33***				***21***	***17***				***22***	***18***				***18***	***14***				***8***	***4***		
Compressor (air)	1	80	40%	1000	44	40	43	10	1000	37	33	36	17	560	21	17	20	38	275	22	18	21	43	440	18	14	17	43	795	8	4	7	48
Building 9 Construction					***58***	***51***				***51***	***44***				***60***	***53***				***60***	***54***				***57***	***50***				***47***	***40***		
Man Lift	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Man Lift	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Crane	1	85	16%	1300	47	39	42	10	1300	40	32	35	17	810	48	40	43	13	700	44	36	39	18	700	44	36	39	18	1010	36	28	31	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Dump Truck	1	84	40%	1000	48	44	47	10	1000	41	37	40	17	560	50	46	49	13	275	51	47	50	18	440	47	43	46	18	795	37	33	36	23
Pumps	1	77	50%	1300	39	36	39	10	1300	32	29	32	17	810	15	12	15	38	700	11	8	11	43	700	11	8	11	43	1010	3	0	3	48
Roller	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23
Paving					***57***	***53***				***50***	***46***				***59***	***54***				***60***	***55***				***56***	***51***				***46***	***41***		
Drum Mixer	1	80	50%	1300	42	39	42	10	1300	35	32	35	17	810	18	15	18	38	700	14	11	14	43	700	14	11	14	43	1010	6	3	6	48
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Dump Truck	1	84	40%	1300	46	42	45	10	1300	39	35	38	17	810	47	43	46	13	700	43	39	42	18	700	43	39	42	18	1010	35	31	34	23
Paver	1	85	50%	1000	49	46	49	10	1000	42	39	42	17	560	51	48	51	13	275	52	49	52	18	440	48	45	48	18	795	38	35	38	23
Other Equipment	1	85	50%	1000	49	46	49	10	1000	42	39	42	17	560	51	48	51	13	275	52	49	52	18	440	48	45	48	18	795	38	35	38	23
Other Equipment	1	85	50%	1300	47	44	47	10	1300	40	37	40	17	810	48	45	48	13	700	44	41	44	18	700	44	41	44	18	1010	36	33	36	23
Pumps	1	77	50%	1500	37	34	37	10	1500	30	27	30	17	1010	13	10	13	38	900	9	6	9	43	900	9	6	9	43	1210	1	-2	1	48
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Building 9 Arch Coating					***58***	***51***				***51***	***44***				***60***	***53***				***60***	***54***				***57***	***50***				***47***	***40***		
Man Lift	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Man Lift	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Concrete Saw	1	90	20%	1000	54	47	50	10	1000	47	40	43	17	560	56	49	52	13	275	57	50	53	18	440	53	46	49	18	795	43	36	39	23
Crane	1	85	16%	1300	47	39	42	10	1300	40	32	35	17	810	48	40	43	13	700	44	36	39	18	700	44	36	39	18	1010	36	28	31	23
Forklift	1	75	10%	1500	35	25	28	10	1500	28	18	21	17	1010	36	26	29	13	900	32	22	25	18	900	32	22	25	18	1210	24	14	17	23
Dump Truck	1	84	40%	1000	48	44	47	10	1000	41	37	40	17	560	50	46	49	13	275	51	47	50	18	440	47	43	46	18	795	37	33	36	23
Pumps	1	77	50%	1300	39	36	39	10	1300	32	29	32	17	810	15	12	15	38	700	11	8	11	43	700	11	8	11	43	1010	3	0	3	48
Roller	1	85	20%	1000	49	42	45	10	1000	42	35	38	17	560	51	44	47	13	275	52	45	48	18	440	48	41	44	18	795	38	31	34	23
Roller	1	85	20%	1300	47	40	43	10	1300	40	33	36	17	810	48	41	44	13	700	44	37	40	18	700	44	37	40	18	1010	36	29	32	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23
Welder	1	73	40%	1500	33	29	32	10	1500	26	22	25	17	1010	34	30	33	13	900	30	26	29	18	900	30	26	29	18	1210	22	18	21	23

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

ESA

Parameters

Leq to L10 factor	3

C - West - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition					***57***	***51***				***68***	***62***				***49***	***43***				***66***	***60***				***66***	***60***				***48***	***42***			
Compressor (Air)	1	80	40%	975	19	15	18	35	850	30	26	29	25	935	12	8	11	43	220	24	20	23	43	310	26	22	25	38	650	10	6	9	48
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	42	38	41	18	120	58	54	57	18	210	59	55	58	13	550	40	36	39	23
Vacuum Street Sweeper	1	80	10%	975	44	34	37	10	850	55	45	48	0	935	37	27	30	18	220	49	39	42	18	310	51	41	44	13	650	35	25	28	23
Tractor/Loader/Backhoe	1	80	40%	875	45	41	44	10	750	56	52	55	0	835	38	34	37	18	120	54	50	53	18	210	55	51	54	13	550	36	32	35	23
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	37	33	36	18	220	49	45	48	18	310	51	47	50	13	650	35	31	34	23
Site Preparation					***57***	***51***				***68***	***62***				***49***	***43***				***66***	***60***				***66***	***60***				***48***	***42***			
Compressor (Air)	1	80	40%	975	19	15	18	35	850	30	26	29	25	935	12	8	11	43	220	24	20	23	43	310	26	22	25	38	650	10	6	9	48
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	42	38	41	18	120	58	54	57	18	210	59	55	58	13	550	40	36	39	23
Vacuum Street Sweeper	1	80	10%	975	44	34	37	10	850	55	45	48	0	935	37	27	30	18	220	49	39	42	18	310	51	41	44	13	650	35	25	28	23
Tractor/Loader/Backhoe	1	80	40%	875	45	41	44	10	750	56	52	55	0	835	38	34	37	18	120	54	50	53	18	210	55	51	54	13	550	36	32	35	23
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	37	33	36	18	220	49	45	48	18	310	51	47	50	13	650	35	31	34	23
Grading					***54***	***50***				***66***	***61***				***47***	***42***				***62***	***58***				***63***	***59***				***45***	***41***			
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	37	33	36	18	220	49	45	48	18	310	51	47	50	13	650	35	31	34	23
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	37	33	36	18	220	49	45	48	18	310	51	47	50	13	650	35	31	34	23
Excavator	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	43	39	42	18	120	59	55	58	18	210	60	56	59	13	550	41	37	40	23
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	42	38	41	18	120	58	54	57	18	210	59	55	58	13	550	40	36	39	23
Vacuum Street Sweeper	1	80	10%	1075	43	33	36	10	950	54	44	47	0	1035	36	26	29	18	320	46	36	39	18	410	49	39	42	13	750	33	23	26	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Foundations/Concrete Pour					***63***	***57***				***74***	***68***				***56***	***49***				***72***	***65***				***72***	***66***				***54***	***48***			
Auger Drill Rig	1	85	20%	875	25	18	21	35	750	36	29	32	25	835	18	11	14	43	120	34	27	30	43	210	35	28	31	38	550	16	9	12	48
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Crane	1	85	16%	875	50	42	45	10	750	61	54	57	0	835	43	35	38	18	120	59	51	54	18	210	60	52	55	13	550	41	33	36	23
Crane	1	85	16%	975	49	41	44	10	850	60	52	55	0	935	42	34	37	18	220	54	46	49	18	310	56	48	51	13	650	40	32	35	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Grader	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	43	39	42	18	120	59	55	58	18	210	60	56	59	13	550	41	37	40	23
Grader	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	43	39	42	18	120	59	55	58	18	210	60	56	59	13	550	41	37	40	23
Grader	1	85	40%	875	50	46	49	10	750	61	57	60	0	835	43	39	42	18	120	59	55	58	18	210	60	56	59	13	550	41	37	40	23
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	41	37	40	18	220	53	49	52	18	310	55	51	54	13	650	39	35	38	23
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	41	37	40	18	220	53	49	52	18	310	55	51	54	13	650	39	35	38	23
Pumps	1	77	50%	1075	15	12	15	35	950	26	23	26	25	1035	8	5	8	43	320	18	15	18	43	410	21	18	21	38	750	5	2	5	48
Pumps	1	77	50%	1075	15	12	15	35	950	26	23	26	25	1035	8	5	8	43	320	18	15	18	43	410	21	18	21	38	750	5	2	5	48
Pumps	1	77	50%	1075	15	12	15	35	950	26	23	26	25	1035	8	5	8	43	320	18	15	18	43	410	21	18	21	38	750	5	2	5	48
Compactor (ground)	1	80	20%	975	44	37	40	10	850	55	48	51	0	935	37	30	33	18	220	49	42	45	18	310	51	44	47	13	650	35	28	31	23
Compactor (ground)	1	80	20%	1075	43	36	39	10	950	54	47	50	0	1035	36	29	32	18	320	46	39	42	18	410	49	42	45	13	750	33	26	29	23
Compactor (ground)	1	80	20%	1075	43	36	39	10	950	54	47	50	0	1035	36	29	32	18	320	46	39	42	18	410	49	42	45	13	750	33	26	29	23
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	43	36	39	18	120	59	52	55	18	210	60	53	56	13	550	41	34	37	23
Roller	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	42	35	38	18	220	54	47	50	18	310	56	49	52	13	650	40	33	36	23
Roller	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	42	35	38	18	220	54	47	50	18	310	56	49	52	13	650	40	33	36	23
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	37	33	36	18	220	49	45	48	18	310	51	47	50	13	650	35	31	34	23
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	37	33	36	18	220	49	45	48	18	310	51	47	50	13	650	35	31	34	23
Tractor/Loader/Backhoe	1	80	40%	975	44	40	43	10	850	55	51	54	0	935	37	33	36	18	220	49	45	48	18	310	51	47	50	13	650	35	31	34	23

C - West - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Building 10 Construction					***60***	***54***				***71***	***65***				***53***	***46***				***69***	***62***				***69***	***62***				***51***	***45***		
Man Lift	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	43	36	39	18	120	59	52	55	18	210	60	53	56	13	550	41	34	37	23
Man Lift	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	42	35	38	18	220	54	47	50	18	310	56	49	52	13	650	40	33	36	23
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Crane	1	85	16%	875	50	42	45	10	750	61	54	57	0	835	43	35	38	18	120	59	51	54	18	210	60	52	55	13	550	41	33	36	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	41	37	40	18	220	53	49	52	18	310	55	51	54	13	650	39	35	38	23
Pumps	1	77	50%	975	16	13	16	35	850	27	24	27	25	935	9	6	9	43	220	21	18	21	43	310	23	20	23	38	650	7	4	7	48
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	43	36	39	18	120	59	52	55	18	210	60	53	56	13	550	41	34	37	23
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	43	36	39	18	120	59	52	55	18	210	60	53	56	13	550	41	34	37	23
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	41	37	40	18	220	53	49	52	18	310	55	51	54	13	650	39	35	38	23
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	41	37	40	18	220	53	49	52	18	310	55	51	54	13	650	39	35	38	23
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	29	25	28	18	320	39	35	38	18	410	42	38	41	13	750	26	22	25	23
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	29	25	28	18	320	39	35	38	18	410	42	38	41	13	750	26	22	25	23
Building 10 Arch Coating					***59***	***53***				***71***	***64***				***52***	***45***				***68***	***61***				***68***	***62***				***50***	***44***		
Man Lift	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	43	36	39	18	120	59	52	55	18	210	60	53	56	13	550	41	34	37	23
Man Lift	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	42	35	38	18	220	54	47	50	18	310	56	49	52	13	650	40	33	36	23
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Crane	1	85	16%	975	49	41	44	10	850	60	52	55	0	935	42	34	37	18	220	54	46	49	18	310	56	48	51	13	650	40	32	35	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Dump Truck	1	84	40%	875	49	45	48	10	750	60	56	59	0	835	42	38	41	18	120	58	54	57	18	210	59	55	58	13	550	40	36	39	23
Pumps	1	77	50%	975	16	13	16	35	850	27	24	27	25	935	9	6	9	43	220	21	18	21	43	310	23	20	23	38	650	7	4	7	48
Roller	1	85	20%	875	50	43	46	10	750	61	54	57	0	835	43	36	39	18	120	59	52	55	18	210	60	53	56	13	550	41	34	37	23
Roller	1	85	20%	975	49	42	45	10	850	60	53	56	0	935	42	35	38	18	220	54	47	50	18	310	56	49	52	13	650	40	33	36	23
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	29	25	28	18	320	39	35	38	18	410	42	38	41	13	750	26	22	25	23
Welder	1	73	40%	1075	36	32	35	10	950	47	43	46	0	1035	29	25	28	18	320	39	35	38	18	410	42	38	41	13	750	26	22	25	23
Paving					***59***	***54***				***70***	***66***				***51***	***47***				***67***	***62***				***68***	***63***				***50***	***45***		
Drum Mixer	1	80	50%	1075	18	15	18	35	950	29	26	29	25	1035	11	8	11	43	320	21	18	21	43	410	24	21	24	38	750	8	5	8	48
Concrete Saw	1	90	20%	875	55	48	51	10	750	66	59	62	0	835	48	41	44	18	120	64	57	60	18	210	65	58	61	13	550	46	39	42	23
Grader	1	85	40%	975	49	45	48	10	850	60	56	59	0	935	42	38	41	18	220	54	50	53	18	310	56	52	55	13	650	40	36	39	23
Forklift	1	75	10%	1075	38	28	31	10	950	49	39	42	0	1035	31	21	24	18	320	41	31	34	18	410	44	34	37	13	750	28	18	21	23
Dump Truck	1	84	40%	975	48	44	47	10	850	59	55	58	0	935	41	37	40	18	220	53	49	52	18	310	55	51	54	13	650	39	35	38	23
Paver	1	85	50%	875	50	47	50	10	750	61	58	61	0	835	43	40	43	18	120	59	56	59	18	210	60	57	60	13	550	41	38	41	23
Other Equipment	1	85	50%	875	50	47	50	10	750	61	58	61	0	835	43	40	43	18	120	59	56	59	18	210	60	57	60	13	550	41	38	41	23
Other Equipment	1	85	50%	975	49	46	49	10	850	60	57	60	0	935	42	39	42	18	220	54	51	54	18	310	56	53	56	13	650	40	37	40	23
Pumps	1	77	50%	1075	15	12	15	35	950	26	23	26	25	1035	8	5	8	43	320	18	15	18	43	410	21	18	21	38	750	5	2	5	48

Project: Fourth & Central

Construction Noise Impact on Sensitive Receptors

ESA

Parameters

Leq to L10 factor	3

D - North - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase ***Equipment Type***	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shieldin g, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition					***68***	***63***				***74***	***68***				***50***	***45***				***57***	***52***				***71***	***66***				***63***	***58***			
Compressor (Air)	1	80	40%	520	25	21	24	35	600	30	26	29	28	1450	8	4	7	43	650	15	11	14	43	300	26	22	25	38	640	20	16	19	38
Man Lift	1	85	20%	520	55	48	51	10	600	60	53	56	3	1450	38	31	34	18	650	45	38	41	18	300	56	49	52	13	640	50	43	46	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	53	49	52	3	1650	32	28	31	18	850	37	33	36	18	450	48	44	47	13	815	43	39	42	13
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	53	49	52	3	1650	32	28	31	18	850	37	33	36	18	450	48	44	47	13	815	43	39	42	13
Other Equipment	1	85	50%	380	57	54	57	10	430	63	60	63	3	1250	39	36	39	18	510	47	44	47	18	175	61	58	61	13	470	53	50	53	13
Other Equipment	1	85	50%	380	57	54	57	10	430	63	60	63	3	1250	39	36	39	18	510	47	44	47	18	175	61	58	61	13	470	53	50	53	13
Excavator	1	85	40%	380	57	53	56	10	430	63	59	62	3	1250	39	35	38	18	510	47	43	46	18	175	61	57	60	13	470	53	49	52	13
Excavator	1	85	40%	520	55	51	54	10	600	60	56	59	3	1450	38	34	37	18	650	45	41	44	18	300	56	52	55	13	640	50	46	49	13
Dump Truck	1	84	40%	520	54	50	53	10	600	59	55	58	3	1450	37	33	36	18	650	44	40	43	18	300	55	51	54	13	640	49	45	48	13
Vacuum Street Sweeper	1	80	10%	720	47	37	40	10	775	53	43	46	3	1650	32	22	25	18	850	37	27	30	18	450	48	38	41	13	815	43	33	36	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Site Preparation					***58***	***54***				***64***	***60***				***41***	***37***				***48***	***44***				***62***	***58***				***54***	***50***			
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	53	49	52	3	1650	32	28	31	18	850	37	33	36	18	450	48	44	47	13	815	43	39	42	13
Grader	1	85	40%	380	57	53	56	10	430	63	59	62	3	1250	39	35	38	18	510	47	43	46	18	175	61	57	60	13	470	53	49	52	13
Grading					***63***	***59***				***69***	***65***				***46***	***41***				***53***	***49***				***67***	***63***				***59***	***54***			
Tractor/Loader/Backhoe	1	80	40%	380	52	48	51	10	430	58	54	57	3	1250	34	30	33	18	510	42	38	41	18	175	56	52	55	13	470	48	44	47	13
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Excavator	1	85	40%	380	57	53	56	10	430	63	59	62	3	1250	39	35	38	18	510	47	43	46	18	175	61	57	60	13	470	53	49	52	13
Excavator	1	85	40%	380	57	53	56	10	430	63	59	62	3	1250	39	35	38	18	510	47	43	46	18	175	61	57	60	13	470	53	49	52	13
Dump Truck	1	84	40%	380	56	52	55	10	430	62	58	61	3	1250	38	34	37	18	510	46	42	45	18	175	60	56	59	13	470	52	48	51	13
Vacuum Street Sweeper	1	80	10%	720	47	37	40	10	775	53	43	46	3	1650	32	22	25	18	850	37	27	30	18	450	48	38	41	13	815	43	33	36	13
Compactor (ground)	1	80	20%	520	50	43	46	10	600	55	48	51	3	1450	33	26	29	18	650	40	33	36	18	300	51	44	47	13	640	45	38	41	13
Vacuum Street Sweeper	1	80	10%	720	47	37	40	10	775	53	43	46	3	1650	32	22	25	18	850	37	27	30	18	450	48	38	41	13	815	43	33	36	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Foundations/Concrete Pour					***65***	***59***				***71***	***64***				***47***	***40***				***55***	***48***				***69***	***62***				***60***	***54***			
Auger Drill Rig	1	85	20%	380	32	25	28	35	430	38	31	34	28	1250	14	7	10	43	510	22	15	18	43	175	36	29	32	38	470	28	21	24	38
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Crane	1	85	16%	380	57	49	52	10	430	63	55	58	3	1250	39	31	34	18	510	47	39	42	18	175	61	53	56	13	470	53	45	48	13
Crane	1	85	16%	520	55	47	50	10	600	60	52	55	3	1450	38	30	33	18	650	45	37	40	18	300	56	48	51	13	640	50	42	45	13
Dump Truck	1	84	40%	380	56	52	55	10	430	62	58	61	3	1250	38	34	37	18	510	46	42	45	18	175	60	56	59	13	470	52	48	51	13
Pumps	1	77	50%	520	22	19	22	35	600	27	24	27	28	1450	5	2	5	43	650	12	9	12	43	300	23	20	23	38	640	17	14	17	38
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Compactor (ground)	1	80	20%	520	50	43	46	10	600	55	48	51	3	1450	33	26	29	18	650	40	33	36	18	300	51	44	47	13	640	45	38	41	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Welder	1	73	40%	720	40	36	39	10	775	46	42	45	3	1650	25	21	24	18	850	30	26	29	18	450	41	37	40	13	815	36	32	35	13
Building 1 Construction					***68***	***62***				***74***	***68***				***50***	***44***				***58***	***51***				***72***	***65***				***63***	***57***			
Man Lift	1	85	20%	380	57	50	53	10	430	63	56	59	3	1250	39	32	35	18	510	47	40	43	18	175	61	54	57	13	470	53	46	49	13
Man Lift	1	85	20%	520	55	48	51	10	600	60	53	56	3	1450	38	31	34	18	650	45	38	41	18	300	56	49	52	13	640	50	43	46	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Crane	1	85	16%	520	55	47	50	10	600	60	52	55	3	1450	38	30	33	18	650	45	37	40	18	300	56	48	51	13	640	50	42	45	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Dump Truck	1	84	40%	380	56	52	55	10	430	62	58	61	3	1250	38	34	37	18	510	46	42	45	18	175	60	56	59	13	470	52	48	51	13
Dump Truck	1	84	40%	380	56	52	55	10	430	62	58	61	3	1250	38	34	37	18	510	46	42	45	18	175	60	56	59	13	470	52	48	51	13
Pumps	1	77	50%	520	22	19	22	35	600	27	24	27	28	1450	5	2	5	43	650	12	9	12	43	300	23	20	23	38	640	17	14	17	38
Pumps	1	77	50%	720	19	16	19	35	775	25	22	25	28	1650	4	1	4	43	850	9	6	9	43	450	20	17	20	38	815	15	12	15	38
Roller	1	85	20%	380	57	50	53	10	430	63	56	59	3	1250	39	32	35	18	510	47	40	43	18	175	61	54	57	13	470	53	46	49	13
Roller	1	85	20%	520	55	48	51	10	600	60	53	56	3	1450	38	31	34	18	650	45	38	41	18	300	56	49	52	13	640	50	43	46	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13

D - North - Mitigated (Ground level)				R1					R2					R3					R4					R5					R6				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Building 1 Arch Coating					***27***	***23***				***33***	***29***				***9***	***5***				***17***	***13***				***31***	***27***				***23***	***19***		
Compressor (air)	1	80	40%	380	27	23	26	35	430	33	29	32	28	1250	9	5	8	43	510	17	13	16	43	175	31	27	30	38	470	23	19	22	38
Building 2 Construction					***70***	***64***				***76***	***70***				***52***	***46***				***60***	***53***				***74***	***67***				***66***	***59***		
Man Lift	1	85	20%	520	55	48	51	10	600	60	53	56	3	1450	38	31	34	18	650	45	38	41	18	300	56	49	52	13	640	50	43	46	13
Man Lift	1	85	20%	520	55	48	51	10	600	60	53	56	3	1450	38	31	34	18	650	45	38	41	18	300	56	49	52	13	640	50	43	46	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Crane	1	85	16%	520	55	47	50	10	600	60	52	55	3	1450	38	30	33	18	650	45	37	40	18	300	56	48	51	13	640	50	42	45	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13
Grader	1	85	40%	380	57	53	56	10	430	63	59	62	3	1250	39	35	38	18	510	47	43	46	18	175	61	57	60	13	470	53	49	52	13
Grader	1	85	40%	520	55	51	54	10	600	60	56	59	3	1450	38	34	37	18	650	45	41	44	18	300	56	52	55	13	640	50	46	49	13
Dump Truck	1	84	40%	520	54	50	53	10	600	59	55	58	3	1450	37	33	36	18	650	44	40	43	18	300	55	51	54	13	640	49	45	48	13
Pumps	1	77	50%	720	19	16	19	35	775	25	22	25	28	1650	4	1	4	43	850	9	6	9	43	450	20	17	20	38	815	15	12	15	38
Pumps	1	77	50%	720	19	16	19	35	775	25	22	25	28	1650	4	1	4	43	850	9	6	9	43	450	20	17	20	38	815	15	12	15	38
Tractor/Loader/Backhoe	1	80	40%	520	50	46	49	10	600	55	51	54	3	1450	33	29	32	18	650	40	36	39	18	300	51	47	50	13	640	45	41	44	13
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	53	49	52	3	1650	32	28	31	18	850	37	33	36	18	450	48	44	47	13	815	43	39	42	13
Tractor/Loader/Backhoe	1	80	40%	720	47	43	46	10	775	53	49	52	3	1650	32	28	31	18	850	37	33	36	18	450	48	44	47	13	815	43	39	42	13
Building 2 Arch Coating					***22***	***18***				***28***	***24***				***7***	***3***				***12***	***8***				***23***	***19***				***18***	***14***		
Compressor (air)	1	80	40%	720	22	18	21	35	775	28	24	27	28	1650	7	3	6	43	850	12	8	11	43	450	23	19	22	38	815	18	14	17	38
Paving					***65***	***61***				***71***	***66***				***47***	***43***				***55***	***50***				***69***	***64***				***60***	***56***		
Drum Mixer	1	80	50%	520	25	22	25	35	600	30	27	30	28	1450	8	5	8	43	650	15	12	15	43	300	26	23	26	38	640	20	17	20	38
Concrete Saw	1	90	20%	380	62	55	58	10	430	68	61	64	3	1250	44	37	40	18	510	52	45	48	18	175	66	59	62	13	470	58	51	54	13
Dump Truck	1	84	40%	520	54	50	53	10	600	59	55	58	3	1450	37	33	36	18	650	44	40	43	18	300	55	51	54	13	640	49	45	48	13
Paver	1	85	50%	380	57	54	57	10	430	63	60	63	3	1250	39	36	39	18	510	47	44	47	18	175	61	58	61	13	470	53	50	53	13
Other Equipment	1	85	50%	380	57	54	57	10	430	63	60	63	3	1250	39	36	39	18	510	47	44	47	18	175	61	58	61	13	470	53	50	53	13
Other Equipment	1	85	50%	520	55	52	55	10	600	60	57	60	3	1450	38	35	38	18	650	45	42	45	18	300	56	53	56	13	640	50	47	50	13
Pumps	1	77	50%	720	19	16	19	35	775	25	22	25	28	1650	4	1	4	43	850	9	6	9	43	450	20	17	20	38	815	15	12	15	38
Forklift	1	75	10%	720	42	32	35	10	775	48	38	41	3	1650	27	17	20	18	850	32	22	25	18	450	43	33	36	13	815	38	28	31	13

TRAFFIC NOISE ANALYSIS TOOL

Project Name: Fourth & Central
Analysis Scenario: Construction Noise
Source of Traffic Volumes: Gibson

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		
1st Street between Central Avenue and Alameda Street	Hard	30	40	40	35	1612	33	17	70.8	71.1
1st Street e/o Alameda Street	Hard	30	40	40	35	1309	27	13	69.9	70.2
4th St/4th Pl between Hewitt St and Merrick Street/Molino Street	Hard	30	35	35	30	2948	61	30	71.8	72.1
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2244	46	23	70.7	71.0
4th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1954	40	20	70.1	70.4
4th Street e/o Merrick Street/Molino Street	Hard	30	35	35	30	3072	63	32	72.0	72.3
6th Street between Central Avenue and Alameda Street	Hard	30	40	40	35	1421	29	15	70.2	70.5
6th Street e/o Alameda Street	Hard	30	40	40	35	1262	26	13	69.7	70.0
7th Street between Central Avenue and Alameda Street	Hard	30	40	40	35	1633	34	17	70.8	71.1
7th Street e/o Alameda Street	Hard	30	40	40	35	1685	35	17	71.0	71.3
Alameda Street between 1st Street and 2nd Street	Hard	30	40	40	35	2304	48	24	72.3	72.6
Alameda Street between 2nd Street and 3rd Street/4th Place	Hard	30	40	40	35	2097	43	22	71.9	72.2
Alameda Street between 3rd Street/4th Place and 4th Street	Hard	30	40	40	35	2153	44	22	72.0	72.3
Alameda Street between 4th Street and 6th Street	Hard	30	40	40	35	2011	41	21	71.7	72.0
Alameda Street between 6th Street and 7th Street	Hard	30	40	40	35	1892	39	20	71.5	71.8
Alameda Street s/o 7th Street	Hard	30	40	40	35	1996	41	21	71.7	72.0
Central Avenue between 1st Street and 2nd Street	Hard	30	40	40	35	709	15	7	67.2	67.5
Central Avenue between 2nd Street and 3rd Street	Hard	30	40	40	35	1260	26	13	69.7	70.0
Central Avenue between 3rd Street and 4th Street	Hard	30	40	40	35	1295	27	13	69.8	70.1
Central Avenue between 4th Street and 5th Street/Project South Site Driveway	Hard	30	40	40	35	1191	25	12	69.5	69.8
Central Avenue between 5th Street/Project South Site Driveway and 6th Street	Hard	30	40	40	35	1805	37	19	71.3	71.6
Central Avenue between 6th Street and 7th Street	Hard	30	40	40	35	1676	35	17	70.9	71.2
Central Avenue s/o 7th Street	Hard	30	40	40	35	1793	37	18	71.2	71.5
1st Street between Central Avenue and Alameda Street	Hard	30	35	35	30	433	92	129	70.9	71.2
1st Street e/o Alameda Street	Hard	30	35	35	30	433	92	129	70.9	71.2
4th St/4th Pl between Hewitt St and Merrick Street/Molino Street	Hard	30	35	35	30	433	92	129	70.9	71.2
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	433	92	129	70.9	71.2
4th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	433	92	129	70.9	71.2
4th Street e/o Merrick Street/Molino Street	Hard	30	35	35	30	433	92	129	70.9	71.2
6th Street between Central Avenue and Alameda Street	Hard	30	40	40	35	433	92	129	71.7	72.0
6th Street e/o Alameda Street	Hard	30	40	40	35	433	92	129	71.7	72.0
7th Street between Central Avenue and Alameda Street	Hard	30	40	40	35	433	92	129	71.7	72.0
7th Street e/o Alameda Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Alameda Street between 1st Street and 2nd Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Alameda Street between 2nd Street and 3rd Street/4th Place	Hard	30	40	40	35	433	92	129	71.7	72.0
Alameda Street between 3rd Street/4th Place and 4th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Alameda Street between 4th Street and 6th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Alameda Street between 6th Street and 7th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Alameda Street s/o 7th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Central Avenue between 1st Street and 2nd Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Central Avenue between 2nd Street and 3rd Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Central Avenue between 3rd Street and 4th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Central Avenue between 4th Street and 5th Street/Project South Site Driveway	Hard	30	40	40	35	433	92	129	71.7	72.0
Central Avenue between 5th Street/Project South Site Driveway and 6th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Central Avenue between 6th Street and 7th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
Central Avenue s/o 7th Street	Hard	30	40	40	35	433	92	129	71.7	72.0
1st Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2045	125	146	73.1	73.4
1st Street e/o Alameda Street	Hard	30	35	35	30	1742	119	142	72.8	73.1
4th St/4th Pl between Hewitt St and Merrick Street/Molino Street	Hard	30	35	35	30	3381	153	159	74.4	74.7
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2677	138	152	73.8	74.1
4th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2387	132	149	73.5	73.8
4th Street e/o Merrick Street/Molino Street	Hard	30	35	35	30	3505	155	161	74.5	74.8
6th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1854	121	144	72.9	73.2
6th Street e/o Alameda Street	Hard	30	35	35	30	1695	118	142	72.8	73.1
7th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2066	126	146	73.2	73.5
7th Street e/o Alameda Street	Hard	30	35	35	30	2118	127	146	73.2	73.5
Alameda Street between 1st Street and 2nd Street	Hard	30	35	35	30	2737	140	153	73.8	74.1
Alameda Street between 2nd Street and 3rd Street/4th Place	Hard	30	35	35	30	2530	135	151	73.6	73.9
Alameda Street between 3rd Street/4th Place and 4th Street	Hard	30	35	35	30	2586	136	151	73.7	74.0
Alameda Street between 4th Street and 6th Street	Hard	30	35	35	30	2444	133	150	73.6	73.9
Alameda Street between 6th Street and 7th Street	Hard	30	35	35	30	2325	131	149	73.4	73.7
Alameda Street s/o 7th Street	Hard	30	35	35	30	2429	133	150	73.5	73.8
Central Avenue between 1st Street and 2nd Street	Hard	30	35	35	30	1142	107	136	72.0	72.3
Central Avenue between 2nd Street and 3rd Street	Hard	30	35	35	30	1693	118	142	72.7	73.0
Central Avenue between 3rd Street and 4th Street	Hard	30	35	35	30	1728	119	142	72.8	73.1
Central Avenue between 4th Street and 5th Street/Project South Site Driveway	Hard	30	35	35	30	1624	117	141	72.7	73.0
Central Avenue between 5th Street/Project South Site Driveway and 6th Street	Hard	30	35	35	30	2238	129	148	73.4	73.7
Central Avenue between 6th Street and 7th Street	Hard	30	35	35	30	2109	127	146	73.2	73.5
Central Avenue s/o 7th Street	Hard	30	35	35	30	2226	129	147	73.3	73.6

Fourth & Central Project

Vibration Level Calculations

Based on Federal Transit Administration, Office of Planning and Environment

			N =	1.5	
Construction Equipment	**Project Equipment**	**Equipment Peak Particle Velocity @ 25 Feet* (inches/second)**	**Distance to Receptor for < 0.5 PPV (Feet)**	**Estimated Velocity Decibels @ Distance** (VdB)**	**Estimated Peak Particle Velocity @ Distance*** (inches/second)**
Unmitigated Vibration Levels					
V1					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	25	86.9	0.089
Loaded Trucks	Yes	0.076	25	85.6	0.076
Jackhammer	Yes	0.035	25	78.8	0.035
Small Bulldozer	Yes	0.003	25	57.5	0.003
V2					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	25	86.9	0.089
Loaded Trucks	Yes	0.076	25	85.6	0.076
Jackhammer	Yes	0.035	25	78.8	0.035
Small Bulldozer	Yes	0.003	25	57.5	0.003
V3					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	5	107.9	0.995
Loaded Trucks	Yes	0.076	5	106.5	0.850
Jackhammer	Yes	0.035	5	99.8	0.391
Small Bulldozer	Yes	0.003	5	78.5	0.034
V4					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	95	69.6	0.012
Loaded Trucks	Yes	0.076	95	68.2	0.010
Jackhammer	Yes	0.035	95	61.4	0.005
Small Bulldozer	Yes	0.003	95	40.1	0.000
V5					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	250	56.9	0.003
Loaded Trucks	Yes	0.076	250	55.6	0.002
Jackhammer	Yes	0.035	250	48.8	0.001
Small Bulldozer	Yes	0.003	250	27.5	0.000
V6					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	175	61.6	0.005
Loaded Trucks	Yes	0.076	175	60.2	0.004
Jackhammer	Yes	0.035	175	53.5	0.002
Small Bulldozer	Yes	0.003	175	32.1	0.000
V7					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	235	57.8	0.003
Loaded Trucks	Yes	0.076	235	56.4	0.003
Jackhammer	Yes	0.035	235	49.6	0.001
Small Bulldozer	Yes	0.003	235	28.3	0.000
Mitigated Vibration Levels					
Structural Damage					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	25	86.9	0.089
Loaded Trucks	Yes	0.076	20	88.5	0.106
Jackhammer	Yes	0.035	12	88.4	0.105
Small Bulldozer	Yes	0.003	3	85.1	0.072
Human Annoyance					
Large Bulldozer or Bore/Drill Rig	Yes	0.089	80	71.8	0.016
Loaded Trucks	Yes	0.076	72	71.8	0.016
Jackhammer	Yes	0.035	43	71.8	0.016
Small Bulldozer	Yes	0.003	9	70.8	0.014

Source:

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual,* 2018.

Notes:

* Values taken from Table 7-4.

** Based on the formula VdB = 20 x LOG10 (v/v_{ref}), where v_{ref} is equal to 1×10^{-6} in/sec (see page 111).

The approximate rms vibration velocity level (v) is calculated from PPV using a crest factor of 4 (see page 184).

*** Based on the formula $PPV(D) = PPV(25\ ft) \times (25/D)^{N}$, where D is equal to the distance (see page 185).

N = soil type classification factor (typically ranges from 1 to 1.5)

Operational Noise Worksheets

Fourth & Central EIR
Traffic Noise Summary

Roadway Segment	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL)			
		Existing	Existing with Project	Increase over Existing	Significant Impact?
1st Street between Central Avenue and Alameda Street	Commercial/Institutional	69.5	69.6	0.1	No
1st Street e/o Alameda Street	Residential/Commercial	68.6	68.8	0.2	No
2nd Street between Central Avenue and Alameda Street	Commercial	67.0	67.1	0.1	No
2nd Street e/o Alameda Street	Residential/Commercial	65.2	65.2	0.0	No
3rd Street between Central Avenue and Alameda Street	Residential/Commercial	71.8	71.9	0.1	No
3rd Street between San Pedro St and Central Avenue	Institutional/Religious/Commercial	71.8	71.9	0.1	No
3rd Street w/o San Pedro St	Residential/Commercial	70.9	71.0	0.1	No
3rd Street/4th Place between Alameda Street and Hewitt St	Commercial	69.8	70.1	0.3	No
4th St/4th Pl between Hewitt St and Merrick Street/Molino Street	Commercial/Motel	72.1	72.4	0.3	No
4th Street between Alameda Street and Hewitt St	Residential/Commercial	71.0	71.4	0.5	No
4th Street between Central Avenue and Alameda Street	Industrial/Commercial	70.4	70.6	0.2	No
4th Street between San Pedro St and Central Avenue	Industrial/Commercial	70.1	70.4	0.3	No
4th Street e/o Merrick Street/Molino Street	Industrial/Commercial	72.3	72.6	0.3	No
4th Street w/o San Pedro St	Commercial	70.0	70.2	0.2	No
5th Street between San Pedro St and Central Avenue	Commercial/Residential	65.4	65.7	0.3	No
5th Street w/o San Pedro St	Commercial/Residential	65.1	65.5	0.4	No
6th Street between Central Avenue and Alameda Street	Industrial/Commercial	69.0	69.1	0.2	No
6th Street e/o Alameda Street	Industrial/Commercial	68.5	68.6	0.2	No
6th Street w/o Central Avenue	Commercial/Residential	67.6	68.1	0.5	No
7th Street between Central Avenue and Alameda Street	Industrial/Commercial	69.6	69.7	0.1	No
7th Street e/o Alameda Street	Industrial/Commercial	69.7	69.9	0.2	No
7th Street w/o Central Avenue	Commercial/Residential	69.6	69.7	0.2	No
Alameda Street between 1st Street and 2nd Street	Commercial/Residential	72.6	72.9	0.3	No
Alameda Street between 2nd Street and 3rd Street/4th Place	Commercial/Residential	72.2	72.6	0.4	No
Alameda Street between 3rd Street/4th Place and 4th Street	Commercial/Residential	72.3	72.9	0.6	No
Alameda Street between 4th Street and 6th Street	Industrial/Commercial	72.0	72.6	0.6	No
Alameda Street between 6th Street and 7th Street	Industrial/Commercial	71.8	72.1	0.3	No
Alameda Street n/o 1st Street	Institutional/Commercial	72.9	73.2	0.3	No
Alameda Street s/o 7th Street	Industrial/Commercial	72.0	72.2	0.2	No
Central Avenue between 1st Street and 2nd Street	Commercial/Residential	67.5	68.4	0.9	No
Central Avenue between 2nd Street and 3rd Street	Commercial/Residential	70.0	70.5	0.5	No
Central Avenue between 3rd Street and 4th Street	Industrial/Commercial	70.1	71.0	0.9	No
Central Avenue between 4th Street and 5th Street/Project South Site Driveway	Industrial/Commercial	69.8	70.9	1.1	No
Central Avenue between 5th Street/Project South Site Driveway and 6th Street	Industrial/Commercial	71.6	72.3	0.7	No
Central Avenue between 6th Street and 7th Street	Industrial/Commercial	71.2	71.7	0.5	No
Central Avenue s/o 7th Street	Industrial/Commercial	71.5	71.8	0.3	No
Merrick Street/Molino Street n/o 4th Street	Industrial/Commercial	59.1	59.1	0.0	No
Merrick Street/Molino Street s/o 4th Street	Industrial/Commercial	56.5	56.5	0.0	No
San Pedro St between 3rd Street and 4th Street	Industrial/Commercial	69.9	69.9	0.0	No
San Pedro St between 4th Street and 5th Street	Commercial/Residential	70.1	70.2	0.1	No
San Pedro St n/o 3rd Street	Commercial/Residential/Religious	69.3	69.3	0.0	No
San Pedro St s/o 5th Street	Commercial/Residential/Religious	70.2	70.3	0.1	No

Fourth & Central EIR
Traffic Noise Summary

Roadway Segment	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL)			
		Cumulative Year	Cumulative Year with Project	Increase over Existing	Significant Impact?
1st Street between Central Avenue and Alameda Street	Commercial/Institutional	70.0	70.1	0.1	No
1st Street e/o Alameda Street	Residential/Commercial	69.1	69.3	0.2	No
2nd Street between Central Avenue and Alameda Street	Commercial	67.7	67.8	0.1	No
2nd Street e/o Alameda Street	Residential/Commercial	65.8	65.8	0.0	No
3rd Street between Central Avenue and Alameda Street	Residential/Commercial	72.5	72.5	0.1	No
3rd Street between San Pedro St and Central Avenue	Institutional/Religious/Commercial	72.5	72.6	0.1	No
3rd Street w/o San Pedro St	Residential/Commercial	71.7	71.8	0.1	No
3rd Street/4th Place between Alameda Street and Hewitt St	Commercial	70.4	70.6	0.2	No
4th St/4th Pl between Hewitt St and Merrick Street/Molino Street	Commercial/Motel	73.0	73.2	0.2	No
4th Street between Alameda Street and Hewitt St	Residential/Commercial	72.1	72.4	0.3	No
4th Street between Central Avenue and Alameda Street	Industrial/Commercial	71.2	71.4	0.2	No
4th Street between San Pedro St and Central Avenue	Industrial/Commercial	71.0	71.2	0.3	No
4th Street e/o Merrick Street/Molino Street	Industrial/Commercial	73.3	73.5	0.2	No
4th Street w/o San Pedro St	Commercial	70.9	71.1	0.2	No
5th Street between San Pedro St and Central Avenue	Commercial/Residential	66.4	66.6	0.2	No
5th Street w/o San Pedro St	Commercial/Residential	66.0	66.3	0.3	No
6th Street between Central Avenue and Alameda Street	Industrial/Commercial	70.2	70.3	0.1	No
6th Street e/o Alameda Street	Industrial/Commercial	70.7	70.8	0.1	No
6th Street w/o Central Avenue	Commercial/Residential	68.9	69.3	0.4	No
7th Street between Central Avenue and Alameda Street	Industrial/Commercial	71.0	71.1	0.1	No
7th Street e/o Alameda Street	Industrial/Commercial	71.4	71.5	0.2	No
7th Street w/o Central Avenue	Commercial/Residential	70.8	71.0	0.1	No
Alameda Street between 1st Street and 2nd Street	Commercial/Residential	73.7	73.9	0.3	No
Alameda Street between 2nd Street and 3rd Street/4th Place	Commercial/Residential	73.4	73.7	0.3	No
Alameda Street between 3rd Street/4th Place and 4th Street	Commercial/Residential	73.7	74.2	0.4	No
Alameda Street between 4th Street and 6th Street	Industrial/Commercial	73.6	74.0	0.4	No
Alameda Street between 6th Street and 7th Street	Industrial/Commercial	73.2	73.5	0.3	No
Alameda Street n/o 1st Street	Institutional/Commercial	74.1	74.3	0.2	No
Alameda Street s/o 7th Street	Industrial/Commercial	73.2	73.3	0.2	No
Central Avenue between 1st Street and 2nd Street	Commercial/Residential	68.1	68.8	0.8	No
Central Avenue between 2nd Street and 3rd Street	Commercial/Residential	70.5	70.9	0.5	No
Central Avenue between 3rd Street and 4th Street	Industrial/Commercial	70.6	71.4	0.8	No
Central Avenue between 4th Street and 5th Street/Project South Site Driveway	Industrial/Commercial	70.4	71.4	1.0	No
Central Avenue between 5th Street/Project South Site Driveway and 6th Street	Industrial/Commercial	72.2	72.8	0.6	No
Central Avenue between 6th Street and 7th Street	Industrial/Commercial	72.1	72.5	0.4	No
Central Avenue s/o 7th Street	Industrial/Commercial	72.2	72.4	0.2	No
Merrick Street/Molino Street n/o 4th Street	Industrial/Commercial	59.4	59.4	0.0	No
Merrick Street/Molino Street s/o 4th Street	Industrial/Commercial	60.7	60.7	0.0	No
San Pedro St between 3rd Street and 4th Street	Industrial/Commercial	70.6	70.6	0.0	No
San Pedro St between 4th Street and 5th Street	Commercial/Residential	70.8	70.8	0.1	No
San Pedro St n/o 3rd Street	Commercial/Residential/Religious	70.0	70.0	0.0	No
San Pedro St s/o 5th Street	Commercial/Residential/Religious	70.9	71.0	0.1	No

Fourth & Central EIR
Traffic Noise Summary

Roadway Segment	Existing Land Uses Located Along Roadway Segment	Traffic Noise Levels (dBA CNEL) Existing	Cumulative Year with Project	Increase over Existing	Significant Impact?	Project Increment
1st Street between Central Avenue and Alameda Street	Commercial/Institutional	69.5	70.1	0.6	No	0.1
1st Street e/o Alameda Street	Residential/Commercial	68.6	69.3	0.7	No	0.2
2nd Street between Central Avenue and Alameda Street	Commercial	67.0	67.8	0.7	No	0.1
2nd Street e/o Alameda Street	Residential/Commercial	65.2	65.8	0.7	No	0.0
3rd Street between Central Avenue and Alameda Street	Residential/Commercial	71.8	72.5	0.7	No	0.1
3rd Street between San Pedro St and Central Avenue	Institutional/Religious/Commercial	71.8	72.6	0.8	No	0.1
3rd Street w/o San Pedro St	Residential/Commercial	70.9	71.8	0.9	No	0.1
3rd Street/4th Place between Alameda Street and Hewitt St	Commercial	69.8	70.6	0.8	No	0.3
4th St/4th Pl between Hewitt St and Merrick Street/Molino Street	Commercial/Motel	72.1	73.2	1.1	No	0.3
4th Street between Alameda Street and Hewitt St	Residential/Commercial	71.0	72.4	1.4	No	0.5
4th Street between Central Avenue and Alameda Street	Industrial/Commercial	70.4	71.4	1.0	No	0.2
4th Street between San Pedro St and Central Avenue	Industrial/Commercial	70.1	71.2	1.1	No	0.3
4th Street e/o Merrick Street/Molino Street	Industrial/Commercial	72.3	73.5	1.2	No	0.3
4th Street w/o San Pedro St	Commercial	70.0	71.1	1.1	No	0.2
5th Street between San Pedro St and Central Avenue	Commercial/Residential	65.4	66.6	1.2	No	0.3
5th Street w/o San Pedro St	Commercial/Residential	65.1	66.3	1.2	No	0.4
6th Street between Central Avenue and Alameda Street	Industrial/Commercial	69.0	70.3	1.3	No	0.2
6th Street e/o Alameda Street	Industrial/Commercial	68.5	70.8	2.3	No	0.2
6th Street w/o Central Avenue	Commercial/Residential	67.6	69.3	1.7	No	0.5
7th Street between Central Avenue and Alameda Street	Industrial/Commercial	69.6	71.1	1.5	No	0.1
7th Street e/o Alameda Street	Industrial/Commercial	69.7	71.5	1.8	No	0.2
7th Street w/o Central Avenue	Commercial/Residential	69.6	71.0	1.4	No	0.2
Alameda Street between 1st Street and 2nd Street	Commercial/Residential	72.6	73.9	1.3	No	0.3
Alameda Street between 2nd Street and 3rd Street/4th Place	Commercial/Residential	72.2	73.7	1.5	No	0.4
Alameda Street between 3rd Street/4th Place and 4th Street	Commercial/Residential	72.3	74.2	1.8	No	0.6
Alameda Street between 4th Street and 6th Street	Industrial/Commercial	72.0	74.0	2.0	No	0.6
Alameda Street between 6th Street and 7th Street	Industrial/Commercial	71.8	73.5	1.7	No	0.3
Alameda Street n/o 1st Street	Institutional/Commercial	72.9	74.3	1.4	No	0.3
Alameda Street s/o 7th Street	Industrial/Commercial	72.0	73.3	1.3	No	0.2
Central Avenue between 1st Street and 2nd Street	Commercial/Residential	67.5	68.8	1.3	No	0.9
Central Avenue between 2nd Street and 3rd Street	Commercial/Residential	70.0	70.9	0.9	No	0.5
Central Avenue between 3rd Street and 4th Street	Industrial/Commercial	70.1	71.4	1.3	No	0.9
Central Avenue between 4th Street and 5th Street/Project South Site Drive	Industrial/Commercial	69.8	71.4	1.6	No	1.1
Central Avenue between 5th Street/Project South Site Driveway and 6th St	Industrial/Commercial	71.6	72.8	1.3	No	0.7
Central Avenue between 6th Street and 7th Street	Industrial/Commercial	71.2	72.5	1.3	No	0.5
Central Avenue s/o 7th Street	Industrial/Commercial	71.5	72.4	0.9	No	0.3
Merrick Street/Molino Street n/o 4th Street	Industrial/Commercial	59.1	59.4	0.4	No	0.0
Merrick Street/Molino Street s/o 4th Street	Industrial/Commercial	56.5	60.7	4.2	No	0.0
San Pedro St between 3rd Street and 4th Street	Industrial/Commercial	69.9	70.6	0.7	No	0.0
San Pedro St between 4th Street and 5th Street	Commercial/Residential	70.1	70.8	0.8	No	0.1
San Pedro St n/o 3rd Street	Commercial/Residential/Religious	69.3	70.0	0.7	No	0.0
San Pedro St s/o 5th Street	Commercial/Residential/Religious	70.2	71.0	0.8	No	0.1

TRAFFIC NOISE ANALYSIS TOOL

Project Name: Fourth & Central
Analysis Scenario: Existing
Source of Traffic Volumes: Gibson

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		
1st Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1612	33	17	69.2	69.5
1st Street e/o Alameda Street	Hard	30	35	35	30	1309	27	13	68.3	68.6
2nd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	910	19	9	66.7	67.0
2nd Street e/o Alameda Street	Hard	30	35	35	30	593	12	6	64.9	65.2
3rd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2724	56	28	71.5	71.8
3rd Street between San Pedro St and Central Avenue	Hard	30	35	35	30	2754	57	28	71.5	71.8
3rd Street w/o San Pedro St	Hard	30	35	35	30	2194	45	23	70.6	70.9
3rd Street/4th Place between Alameda Street and Hewitt St	Hard	30	35	35	30	1719	35	18	69.5	69.8
4th St/4th Pl between Hewitt St and Merrick Street/Molino Stree	Hard	30	35	35	30	2948	61	30	71.8	72.1
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2244	46	23	70.7	71.0
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2244	46	23	70.7	71.0
4th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1954	40	20	70.1	70.4
4th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	1827	38	19	69.8	70.1
4th Street e/o Merrick Street/Molino Street	Hard	30	35	35	30	3072	63	32	72.0	72.3
4th Street w/o San Pedro St	Hard	30	35	35	30	1794	37	18	69.7	70.0
5th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	624	13	6	65.1	65.4
5th Street w/o San Pedro St	Hard	30	35	35	30	585	12	6	64.8	65.1
6th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1421	29	15	68.7	69.0
6th Street e/o Alameda Street	Hard	30	35	35	30	1262	26	13	68.2	68.5
6th Street w/o Central Avenue	Hard	30	35	35	30	1034	21	11	67.3	67.6
7th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1633	34	17	69.3	69.6
7th Street e/o Alameda Street	Hard	30	35	35	30	1685	35	17	69.4	69.7
7th Street w/o Central Avenue	Hard	30	35	35	30	1628	34	17	69.3	69.6
Alameda Street between 1st Street and 2nd Street	Hard	30	40	40	35	2304	48	24	72.3	72.6
Alameda Street between 2nd Street and 3rd Street/4th Place	Hard	30	40	40	35	2097	43	22	71.9	72.2
Alameda Street between 3rd Street/4th Place and 4th Street	Hard	30	40	40	35	2153	44	22	72.0	72.3
Alameda Street between 4th Street and 6th Street	Hard	30	40	40	35	2011	41	21	71.7	72.0
Alameda Street between 6th Street and 7th Street	Hard	30	40	40	35	1892	39	20	71.5	71.8
Alameda Street n/o 1st Street	Hard	30	40	40	35	2457	51	25	72.6	72.9
Alameda Street s/o 7th Street	Hard	30	40	40	35	1996	41	21	71.7	72.0
Central Avenue between 1st Street and 2nd Street	Hard	30	40	40	35	709	15	7	67.2	67.5
Central Avenue between 2nd Street and 3rd Street	Hard	30	40	40	35	1260	26	13	69.7	70.0
Central Avenue between 3rd Street and 4th Street	Hard	30	40	40	35	1295	27	13	69.8	70.1
Central Avenue between 4th Street and 5th Street/Project South	Hard	30	40	40	35	1191	25	12	69.5	69.8
Central Avenue between 5th Street/Project South Site Driveway a	Hard	30	40	40	35	1805	37	19	71.3	71.6
Central Avenue between 6th Street and 7th Street	Hard	30	40	40	35	1676	35	17	70.9	71.2
Central Avenue s/o 7th Street	Hard	30	40	40	35	1793	37	18	71.2	71.5
Merrick Street/Molino Street n/o 4th Street	Hard	30	30	30	25	207	4	2	58.8	59.1
Merrick Street/Molino Street s/o 4th Street	Hard	30	30	30	25	114	2	1	56.2	56.5
San Pedro St between 3rd Street and 4th Street	Hard	30	40	40	35	1237	26	13	69.6	69.9
San Pedro St between 4th Street and 5th Street	Hard	30	40	40	35	1285	27	13	69.8	70.1
San Pedro St n/o 3rd Street	Hard	30	40	40	35	1061	22	11	69.0	69.3
San Pedro St s/o 5th Street	Hard	30	40	40	35	1314	27	14	69.9	70.2

TRAFFIC NOISE ANALYSIS TOOL

Project Name: Fourth & Central
Analysis Scenario: Existing + Project
Source of Traffic Volumes: Gibson

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		
1st Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1647	34	17	69.3	69.6
1st Street e/o Alameda Street	Hard	30	35	35	30	1365	28	14	68.5	68.8
2nd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	932	19	10	66.8	67.1
2nd Street e/o Alameda Street	Hard	30	35	35	30	593	12	6	64.9	65.2
3rd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2761	57	28	71.6	71.9
3rd Street between San Pedro St and Central Avenue	Hard	30	35	35	30	2808	58	29	71.6	71.9
3rd Street w/o San Pedro St	Hard	30	35	35	30	2247	46	23	70.7	71.0
3rd Street/4th Place between Alameda Street and Hewitt St	Hard	30	35	35	30	1825	38	19	69.8	70.1
4th St/4th Pl between Hewitt St and Merrick Street/Molino Stree	Hard	30	35	35	30	3132	65	32	72.1	72.4
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2496	51	26	71.1	71.4
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2496	51	26	71.1	71.4
4th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2053	42	21	70.3	70.6
4th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	1957	40	20	70.1	70.4
4th Street e/o Merrick Street/Molino Street	Hard	30	35	35	30	3256	67	34	72.3	72.6
4th Street w/o San Pedro St	Hard	30	35	35	30	1896	39	20	69.9	70.2
5th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	663	14	7	65.4	65.7
5th Street w/o San Pedro St	Hard	30	35	35	30	634	13	7	65.2	65.5
6th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1471	30	15	68.8	69.1
6th Street e/o Alameda Street	Hard	30	35	35	30	1314	27	14	68.3	68.6
6th Street w/o Central Avenue	Hard	30	35	35	30	1159	24	12	67.8	68.1
7th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1676	35	17	69.4	69.7
7th Street e/o Alameda Street	Hard	30	35	35	30	1774	37	18	69.6	69.9
7th Street w/o Central Avenue	Hard	30	35	35	30	1699	35	18	69.4	69.7
Alameda Street between 1st Street and 2nd Street	Hard	30	40	40	35	2481	51	26	72.6	72.9
Alameda Street between 2nd Street and 3rd Street/4th Place	Hard	30	40	40	35	2297	47	24	72.3	72.6
Alameda Street between 3rd Street/4th Place and 4th Street	Hard	30	40	40	35	2467	51	25	72.6	72.9
Alameda Street between 4th Street and 6th Street	Hard	30	40	40	35	2309	48	24	72.3	72.6
Alameda Street between 6th Street and 7th Street	Hard	30	40	40	35	2048	42	21	71.8	72.1
Alameda Street n/o 1st Street	Hard	30	40	40	35	2613	54	27	72.9	73.2
Alameda Street s/o 7th Street	Hard	30	40	40	35	2094	43	22	71.9	72.2
Central Avenue between 1st Street and 2nd Street	Hard	30	40	40	35	869	18	9	68.1	68.4
Central Avenue between 2nd Street and 3rd Street	Hard	30	40	40	35	1419	29	15	70.2	70.5
Central Avenue between 3rd Street and 4th Street	Hard	30	40	40	35	1577	33	16	70.7	71.0
Central Avenue between 4th Street and 5th Street/Project South	Hard	30	40	40	35	1549	32	16	70.6	70.9
Central Avenue between 5th Street/Project South Site Driveway a	Hard	30	40	40	35	2118	44	22	72.0	72.3
Central Avenue between 6th Street and 7th Street	Hard	30	40	40	35	1859	38	19	71.4	71.7
Central Avenue s/o 7th Street	Hard	30	40	40	35	1907	39	20	71.5	71.8
Merrick Street/Molino Street n/o 4th Street	Hard	30	30	30	25	207	4	2	58.8	59.1
Merrick Street/Molino Street s/o 4th Street	Hard	30	30	30	25	114	2	1	56.2	56.5
San Pedro St between 3rd Street and 4th Street	Hard	30	40	40	35	1239	26	13	69.6	69.9
San Pedro St between 4th Street and 5th Street	Hard	30	40	40	35	1311	27	14	69.9	70.2
San Pedro St n/o 3rd Street	Hard	30	40	40	35	1063	22	11	69.0	69.3
San Pedro St s/o 5th Street	Hard	30	40	40	35	1348	28	14	70.0	70.3

TRAFFIC NOISE ANALYSIS TOOL

Project Name: Fourth & Central
Analysis Scenario: Future Baseline
Source of Traffic Volumes: Gibson

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		
1st Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1811	37	19	69.7	70.0
1st Street e/o Alameda Street	Hard	30	35	35	30	1469	30	15	68.8	69.1
2nd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1057	22	11	67.4	67.7
2nd Street e/o Alameda Street	Hard	30	35	35	30	692	14	7	65.5	65.8
3rd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	3199	66	33	72.2	72.5
3rd Street between San Pedro St and Central Avenue	Hard	30	35	35	30	3237	67	33	72.2	72.5
3rd Street w/o San Pedro St	Hard	30	35	35	30	2644	55	27	71.4	71.7
3rd Street/4th Place between Alameda Street and Hewitt St	Hard	30	35	35	30	1970	41	20	70.1	70.4
4th St/4th Pl between Hewitt St and Merrick Street/Molino Stree	Hard	30	35	35	30	3575	74	37	72.7	73.0
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2912	60	30	71.8	72.1
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	2912	60	30	71.8	72.1
4th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2363	49	24	70.9	71.2
4th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	2245	46	23	70.7	71.0
4th Street e/o Merrick Street/Molino Street	Hard	30	35	35	30	3874	80	40	73.0	73.3
4th Street w/o San Pedro St	Hard	30	35	35	30	2196	45	23	70.6	70.9
5th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	792	16	8	66.1	66.4
5th Street w/o San Pedro St	Hard	30	35	35	30	716	15	7	65.7	66.0
6th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1871	39	19	69.9	70.2
6th Street e/o Alameda Street	Hard	30	35	35	30	2104	43	22	70.4	70.7
6th Street w/o Central Avenue	Hard	30	35	35	30	1407	29	15	68.6	68.9
7th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2251	46	23	70.7	71.0
7th Street e/o Alameda Street	Hard	30	35	35	30	2462	51	25	71.1	71.4
7th Street w/o Central Avenue	Hard	30	35	35	30	2189	45	23	70.5	70.8
Alameda Street between 1st Street and 2nd Street	Hard	30	40	40	35	2926	60	30	73.4	73.7
Alameda Street between 2nd Street and 3rd Street/4th Place	Hard	30	40	40	35	2749	57	28	73.1	73.4
Alameda Street between 3rd Street/4th Place and 4th Street	Hard	30	40	40	35	2959	61	31	73.4	73.7
Alameda Street between 4th Street and 6th Street	Hard	30	40	40	35	2862	59	30	73.3	73.6
Alameda Street between 6th Street and 7th Street	Hard	30	40	40	35	2612	54	27	72.9	73.2
Alameda Street n/o 1st Street	Hard	30	40	40	35	3225	67	33	73.8	74.1
Alameda Street s/o 7th Street	Hard	30	40	40	35	2601	54	27	72.9	73.2
Central Avenue between 1st Street and 2nd Street	Hard	30	40	40	35	804	17	8	67.8	68.1
Central Avenue between 2nd Street and 3rd Street	Hard	30	40	40	35	1404	29	14	70.2	70.5
Central Avenue between 3rd Street and 4th Street	Hard	30	40	40	35	1451	30	15	70.3	70.6
Central Avenue between 4th Street and 5th Street/Project South	Hard	30	40	40	35	1376	28	14	70.1	70.4
Central Avenue between 5th Street/Project South Site Driveway a	Hard	30	40	40	35	2105	43	22	71.9	72.2
Central Avenue between 6th Street and 7th Street	Hard	30	40	40	35	2059	42	21	71.8	72.1
Central Avenue s/o 7th Street	Hard	30	40	40	35	2093	43	22	71.9	72.2
Merrick Street/Molino Street n/o 4th Street	Hard	30	30	30	25	226	5	2	59.1	59.4
Merrick Street/Molino Street s/o 4th Street	Hard	30	30	30	25	303	6	3	60.4	60.7
San Pedro St between 3rd Street and 4th Street	Hard	30	40	40	35	1439	30	15	70.3	70.6
San Pedro St between 4th Street and 5th Street	Hard	30	40	40	35	1502	31	15	70.5	70.8
San Pedro St n/o 3rd Street	Hard	30	40	40	35	1252	26	13	69.7	70.0
San Pedro St s/o 5th Street	Hard	30	40	40	35	1543	32	16	70.6	70.9

TRAFFIC NOISE ANALYSIS TOOL

Project Name: Fourth & Central
Analysis Scenario: Future + Project
Source of Traffic Volumes: Gibson

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		
1st Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1846	38	19	69.8	70.1
1st Street e/o Alameda Street	Hard	30	35	35	30	1525	31	16	69.0	69.3
2nd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1080	22	11	67.5	67.8
2nd Street e/o Alameda Street	Hard	30	35	35	30	692	14	7	65.5	65.8
3rd Street between Central Avenue and Alameda Street	Hard	30	35	35	30	3236	67	33	72.2	72.5
3rd Street between San Pedro St and Central Avenue	Hard	30	35	35	30	3291	68	34	72.3	72.6
3rd Street w/o San Pedro St	Hard	30	35	35	30	2698	56	28	71.5	71.8
3rd Street/4th Place between Alameda Street and Hewitt St	Hard	30	35	35	30	2076	43	21	70.3	70.6
4th St/4th Pl between Hewitt St and Merrick Street/Molino Stree	Hard	30	35	35	30	3760	78	39	72.9	73.2
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	3096	64	32	72.1	72.4
4th Street between Alameda Street and Hewitt St	Hard	30	35	35	30	3096	64	32	72.1	72.4
4th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2462	51	25	71.1	71.4
4th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	2376	49	24	70.9	71.2
4th Street e/o Merrick Street/Molino Street	Hard	30	35	35	30	4058	84	42	73.2	73.5
4th Street w/o San Pedro St	Hard	30	35	35	30	2299	47	24	70.8	71.1
5th Street between San Pedro St and Central Avenue	Hard	30	35	35	30	830	17	9	66.3	66.6
5th Street w/o San Pedro St	Hard	30	35	35	30	765	16	8	66.0	66.3
6th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	1922	40	20	70.0	70.3
6th Street e/o Alameda Street	Hard	30	35	35	30	2156	44	22	70.5	70.8
6th Street w/o Central Avenue	Hard	30	35	35	30	1532	32	16	69.0	69.3
7th Street between Central Avenue and Alameda Street	Hard	30	35	35	30	2295	47	24	70.8	71.1
7th Street e/o Alameda Street	Hard	30	35	35	30	2551	53	26	71.2	71.5
7th Street w/o Central Avenue	Hard	30	35	35	30	2261	47	23	70.7	71.0
Alameda Street between 1st Street and 2nd Street	Hard	30	40	40	35	3104	64	32	73.6	73.9
Alameda Street between 2nd Street and 3rd Street/4th Place	Hard	30	40	40	35	2949	61	30	73.4	73.7
Alameda Street between 3rd Street/4th Place and 4th Street	Hard	30	40	40	35	3273	67	34	73.9	74.2
Alameda Street between 4th Street and 6th Street	Hard	30	40	40	35	3160	65	33	73.7	74.0
Alameda Street between 6th Street and 7th Street	Hard	30	40	40	35	2803	58	29	73.2	73.5
Alameda Street n/o 1st Street	Hard	30	40	40	35	3381	70	35	74.0	74.3
Alameda Street s/o 7th Street	Hard	30	40	40	35	2700	56	28	73.0	73.3
Central Avenue between 1st Street and 2nd Street	Hard	30	40	40	35	964	20	10	68.5	68.8
Central Avenue between 2nd Street and 3rd Street	Hard	30	40	40	35	1563	32	16	70.6	70.9
Central Avenue between 3rd Street and 4th Street	Hard	30	40	40	35	1733	36	18	71.1	71.4
Central Avenue between 4th Street and 5th Street/Project South	Hard	30	40	40	35	1734	36	18	71.1	71.4
Central Avenue between 5th Street/Project South Site Driveway a	Hard	30	40	40	35	2418	50	25	72.5	72.8
Central Avenue between 6th Street and 7th Street	Hard	30	40	40	35	2242	46	23	72.2	72.5
Central Avenue s/o 7th Street	Hard	30	40	40	35	2208	46	23	72.1	72.4
Merrick Street/Molino Street n/o 4th Street	Hard	30	30	30	25	226	5	2	59.1	59.4
Merrick Street/Molino Street s/o 4th Street	Hard	30	30	30	25	303	6	3	60.4	60.7
San Pedro St between 3rd Street and 4th Street	Hard	30	40	40	35	1441	30	15	70.3	70.6
San Pedro St between 4th Street and 5th Street	Hard	30	40	40	35	1528	32	16	70.5	70.8
San Pedro St n/o 3rd Street	Hard	30	40	40	35	1254	26	13	69.7	70.0
San Pedro St s/o 5th Street	Hard	30	40	40	35	1577	33	16	70.7	71.0

Project: Fourth & Central

Mechanical Equipment Noise Calculations

Receptor Location	R1	
Mechanical Equipment Noise Levels	81.9	dBA
Reference Distance	5	ft
Distance to R1 (Building 2)	644	ft
	-42	dBA
	39.7	dBA
Noise Reduction by NOISE-PDF-2	0	dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R1	**39.7**	dBA

Receptor Location	R2	
Mechanical Equipment Noise Levels	81.9	dBA
Reference Distance	5	ft
Distance to R2	384	ft
	-38	dBA
	44.2	dBA
Noise Reduction by NOISE-PDF-2	0	dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R2	**44.2**	dBA

Receptor Location	R3	
Mechanical Equipment Noise Levels	81.9	dBA
Reference Distance	5	ft
Distance to R3	709	ft
	-43	dBA
	38.9	dBA
Noise Reduction by NOISE-PDF-2	0	dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R3	**38.9**	dBA

Receptor Location	R4	
Mechanical Equipment Noise Levels	81.9	dBA
Reference Distance	5	ft
Distance to R4	217	ft
	-33	dBA
	49.1	dBA
Noise Reduction by NOISE-PDF-2	0	dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R4	**49.1**	dBA

Receptor Location	R5	
Mechanical Equipment Noise Levels	81.9	dBA
Reference Distance	5	ft
Distance to R8	190	ft
	-32	dBA
	50.3	dBA
Noise Reduction by NOISE-PDF-2	0	dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R8	**50.3**	dBA

Receptor Location	R6	
Mechanical Equipment Noise Levels	81.9	dBA
Reference Distance	5	ft
Distance to R8	535	ft
	-41	dBA
	41.3	dBA
Noise Reduction by NOISE-PDF-2	0	dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R8	**41.3**	dBA

* Exterior reference noise levels for air condenser units, fans, and related equipment, the primary sources of noise from fixed mechanical equipment, would be 81.9 dBA Leq measured at a distance of 5 feet (based on noise data from large shopping center projects in Southern California). Refer to: City of Moreno Valley, Moreno Valley Walmart Noise Impact Analysis, Table 9-1, Page 71, February 10, 2015; and City of Pomona, Pomona Ranch Plaza Walmart Expansion Project, Table 4.4-5, Pg. 4.4-33, August 2014.

** Distance to receptors assumes that mechanical equipment would be located on the rooftop of the nearest Project Building.

***Assumes noise from the closest Project building mechanical equiment to each receptor

Project: 4th & Central

Parking Structure Noise - Deck

Receptor Location	R1	
Parking Structure Noise Level	57.9	dBA
Reference Distance	50	ft
Distance to R1	410	ft
	-18	dBA
	39.6	dBA
Noise Reduction by NOISE-PDF-2		dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R1	**40**	dBA

Receptor Location	R2	
Parking Structure Noise Level	57.9	dBA
Reference Distance	50	ft
Distance to R2	250	ft
	-14	dBA
	43.9	dBA
Noise Reduction by NOISE-PDF-2		dBA
Noise Reduction by Existing Buildings		dBA
Noise Levels at R2	**44**	dBA

Receptor Location	R3	
Parking Structure Noise Level	57.9	dBA
Reference Distance	50	ft
Distance to R3	650	ft
	-22	dBA
	35.6	dBA
Noise Reduction by NOISE-PDF-2		dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R3	**35.6**	dBA

Receptor Location	R4	
Parking Structure Noise Level	57.9	dBA
Reference Distance	50	ft
Distance to R4	120	ft
	-8	dBA
	50.3	dBA
Noise Reduction by NOISE-PDF-2		dBA
Noise Reduction by Existing Buildings		dBA
Noise Levels at R4	**50.3**	dBA

Receptor Location	R5	
Parking Structure Noise Level	57.9	dBA
Reference Distance	50	ft
Distance to R3	175	ft
	-11	dBA
	47.0	dBA
Noise Reduction by NOISE-PDF-2		dBA
Noise Reduction by Existing Buildings	0	dBA
Noise Levels at R3	**47.0**	dBA

Receptor Location	R6	
Parking Structure Noise Level	57.9	dBA
Reference Distance	50	ft
Distance to R4	530	ft
	-21	dBA
	37.4	dBA
Noise Reduction by NOISE-PDF-2		dBA
Noise Reduction by Existing Buildings		dBA
Noise Levels at R4	**37.4**	dBA

AM or PM Peak Hour Trips	1400	trips
Leq	58	dBA

$$Leq(h) = SELref + 10\log(NA/1000) - 35.6$$

Where: Leq(h) = hourly Leq noise level at 50 feet
SELref (92 dBA SEL) = reference noise level for stationary noise source represented in
NA = number of automobiles per hour

Fourth & Central

Open Space Noise Calculation

Summary - R1

					Daytime				Nighttime			
Outdoor Space	Capacity	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
4th Street Plazas	678	500	38.1	38.1	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Flex Alley (North)	438	800	31.5	31.5	67.7	67.7	72.7	No	60.6	60.6	65.6	No
4th Street Green	365	775	31.4	31.4	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Central Courtyard	1062	825	35.1	35.1	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Residential Paseo	162	830	27.1	27.1	67.7	67.7	72.7	No	60.6	60.6	65.6	No
The Mews	481	970	30.3	30.3	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Fashion Plaza	514	1000	30.3	30.3	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Makers Alley	225	1025	26.9	26.9	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Flex Alley (South)	959	1150	31.2	31.2	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Pop-up Plaza	579	1150	29.9	29.9	67.7	67.7	72.7	No	60.6	60.6	65.6	No
5th Street Pocket Park	320	1300	26.4	26.4	67.7	67.7	72.7	No	60.6	60.6	65.6	No
5th Street Corridor	332	1350	27.8	27.8	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Building 1 Roof Amenity	1239	536	49.0	49.0	67.7	67.8	72.7	No	60.6	60.9	65.6	No
Building 2 Roof Amenity	915	651	47.2	47.2	67.7	67.7	72.7	No	60.6	60.8	65.6	No
Building 5 Rooftop Deck	886	899	34.4	34.4	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Building 6 Roof Amenity	493	1085	42.5	42.5	67.7	67.7	72.7	No	60.6	60.7	65.6	No
Building 7 Rooftop Deck	307	1058	28.4	28.4	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Building 9 Level 5 Deck	720	1152	31.3	31.3	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Building 9 Rooftop Deck	681	1185	30.8	30.8	67.7	67.7	72.7	No	60.6	60.6	65.6	No
Building 10 Rooftop Deck	367	909	30.4	30.4	67.7	67.7	72.7	No	60.6	60.6	65.6	No

Fourth & Central
Open Space Noise Calculation

4th Street Plazas (South)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	500	26.8
Males (Adult)	85	43	3	58	74.3	500	29.9
Children	170	85	3	58	77.3	500	32.9
Total	**339**	**170**	-	-	**79.7**	-	**35.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Northern Landscaped Area (North)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	530	26.3
Males (Adult)	85	43	3	58	74.3	530	29.4
Children	170	85	3	58	77.3	530	32.4
Total	**339**	**170**	-	-	**79.7**	-	**34.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Plazas (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	678		
@ 500 feet	339	170	**35.3**
@ 530 feet	339	170	**34.8**
Total	**678**	**340**	**38.1**

Fourth & Central
Open Space Noise Calculation

Flex Alley North (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	800	19.0
Males (Adult)	37	19	3	58	70.8	800	22.3
Children	73	37	3	58	73.7	800	25.2
Total	**146**	**74**	-	-	**76.1**	-	**27.6**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	85.0	800	54.9

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	900	18.0
Males (Adult)	36	18	3	58	70.6	900	21.0
Children	73	37	3	58	73.7	900	24.1
Total	**145**	**73**	-	-	**76.1**	-	**26.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	37	19	3	55	67.8	1000	17.3
Males (Adult)	37	19	3	58	70.8	1000	20.3
Children	73	37	3	58	73.7	1000	23.2
Total	**147**	**75**	-	-	**76.2**	-	**25.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	438		
@ 800 feet	146	74	27.6
@ 900 feet	145	73	26.5
@ 1000 feet	147	75	25.7
Total	**438**	**222**	**31.5**

Fourth & Central
Open Space Noise Calculation

4th Street Green (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	775	18.5
Males (Adult)	31	16	3	58	70.0	775	21.8
Children	61	31	3	58	72.9	775	24.7
Total	**122**	**62**	-	-	**75.4**	-	**27.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	65.0	775	35.2

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	825	18.0
Males (Adult)	30	15	3	58	69.8	825	21.0
Children	61	31	3	58	72.9	825	24.1
Total	**121**	**61**	-	-	**75.3**	-	**26.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	121						
Females (Adult)	31	16	3	55	67.0	875	17.7
Males (Adult)	31	16	3	58	70.0	875	20.7
Children	61	31	3	58	72.9	875	23.6
Total	**123**	**63**	-	-	**75.4**	-	**26.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	365		
@ 775 feet	122	62	27.1
@ 825 feet	121	61	26.5
@ 875 feet	123	63	26.1
Total	**366**	**186**	**31.4**

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	825	20.5
Males (Adult)	54	27	3	58	72.3	825	23.5
Children	107	54	3	58	75.3	825	26.5
Total	**214**	**108**	-	-	**77.8**	-	**29.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	875	20.0
Males (Adult)	54	27	3	58	72.3	875	23.0
Children	107	54	3	58	75.3	875	26.0
Total	**214**	**108**	-	-	**77.8**	-	**28.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	975	19.1
Males (Adult)	54	27	3	58	72.3	975	22.1
Children	107	54	3	58	75.3	975	25.1
Total	**214**	**108**	-	-	**77.8**	-	**27.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	875	20.0
Males (Adult)	54	27	3	58	72.3	875	23.0
Children	107	54	3	58	75.3	875	26.0
Total	**214**	**108**	-	-	**77.8**	-	**28.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	1075	18.2
Males (Adult)	54	27	3	58	72.3	1075	21.2
Children	107	54	3	58	75.3	1075	24.2
Total	**214**	**108**	-	-	**77.8**	-	**26.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	1062		
@ 825 feet	214	108	29.0
@ 875 feet	214	108	28.5
@ 975 feet	214	108	27.5
@ 875 feet	214	108	28.5
@ 1075 feet	214	108	26.7
Total	**1070**	**540**	**35.1**

Fourth & Central
Open Space Noise Calculation

Residential Paseo (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	830	14.6
Males (Adult)	14	7	3	58	66.5	830	17.6
Children	27	14	3	58	69.5	830	20.6
Total	**54**	**28**	-	-	**71.9**	-	**23.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	915	13.8
Males (Adult)	14	7	3	58	66.5	915	16.8
Children	27	14	3	58	69.5	915	19.8
Total	**54**	**28**	-	-	**71.9**	-	**22.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	1000	13.0
Males (Adult)	14	7	3	58	66.5	1000	16.0
Children	27	14	3	58	69.5	1000	19.0
Total	**54**	**28**	-	-	**71.9**	-	**21.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	162		
@ 830 feet	54	28	23.1
@ 915 feet	54	28	22.2
@ 1000 feet	54	28	21.4
Total	**162**	**84**	**27.1**

Fourth & Central
Open Space Noise Calculation

The Mews (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	970	17.8
Males (Adult)	41	21	3	58	71.2	970	21.0
Children	81	41	3	58	74.1	970	23.9
Total	**162**	**82**	-	-	**76.6**	-	**26.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	1070	17.0
Males (Adult)	41	21	3	58	71.2	1070	20.2
Children	81	41	3	58	74.1	1070	23.1
Total	**162**	**82**	-	-	**76.6**	-	**25.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	160						
Females (Adult)	40	20	3	55	68.0	1170	16.2
Males (Adult)	40	20	3	58	71.0	1170	19.2
Children	80	40	3	58	74.0	1170	22.2
Total	**160**	**80**	-	-	**76.5**	-	**24.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	481		
@ 970 feet	162	82	26.4
@ 1070 feet	162	82	**25.5**
@ 1170 feet	160	80	24.6
Total Day	**484**	**244**	**30.3**

Fourth & Central
Open Space Noise Calculation

Fashion Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1000	18.0
Males (Adult)	43	22	3	58	71.4	1000	21.0
Children	86	43	3	58	74.3	1000	23.9
Total	**172**	**87**	-	-	**76.8**	-	**26.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	1100	16.9
Males (Adult)	42	21	3	58	71.2	1100	19.9
Children	86	43	3	58	74.3	1100	23.0
Total	**170**	**85**	-	-	**76.7**	-	**25.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	1200	16.2
Males (Adult)	42	21	3	58	71.2	1200	19.2
Children	86	43	3	58	74.3	1200	22.3
Total	**170**	**85**	-	-	**76.7**	-	**24.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	514		
@ 1000 feet	172	87	26.4
@ 1100 feet	170	85	**25.4**
@ 1200 feet	170	85	24.7
Total Night	**512**	**257**	**30.3**

Fourth & Central
Open Space Noise Calculation

Makers Alley (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1025	13.9
Males (Adult)	19	10	3	58	68.0	1025	17.3
Children	38	19	3	58	70.8	1025	20.1
Total	**75**	**38**	-	-	**73.3**	-	**22.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1075	13.5
Males (Adult)	19	10	3	58	68.0	1075	16.9
Children	38	19	3	58	70.8	1075	19.7
Total	**75**	**38**	-	-	**73.3**	-	**22.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1125	13.1
Males (Adult)	18	9	3	58	67.5	1125	16.1
Children	38	19	3	58	70.8	1125	19.3
Total	**74**	**37**	-	-	**73.1**	-	**21.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Mesquit Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	225		
@ 1025 feet	75	38	22.6
@ 1075 feet	75	38	**22.2**
@ 1125 feet	74	37	21.6
Total	**224**	**113**	**26.9**

Fourth & Central
Open Space Noise Calculation

Flex Alley South (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	1150	22.4
Males (Adult)	160	80	3	58	77.0	1150	25.4
Total	**320**	**160**	-	-	**78.8**	-	**27.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	1250	21.6
Males (Adult)	160	80	3	58	77.0	1250	24.6
Total	**320**	**160**	-	-	**78.8**	-	**26.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	1350	21.0
Males (Adult)	160	80	3	58	77.0	1350	24.0
Total	**320**	**160**	-	-	**78.8**	-	**25.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	959		
@ 1150 feet	320	160	27.1
@ 1250 feet	320	160	26.4
@ 1350 feet	320	160	25.7
Total	**960**	**480**	**31.2**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	1150	15.9
Males (Adult)	37	19	3	58	70.8	1150	19.1
Children	73	37	3	58	73.7	1150	22.0
Total	**146**	**74**	-	-	**76.1**	-	**24.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	1200	15.5
Males (Adult)	37	19	3	58	70.8	1200	18.7
Children	73	37	3	58	73.7	1200	21.6
Total	**146**	**74**	-	-	**76.1**	-	**24.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	1250	15.2
Males (Adult)	37	19	3	58	70.8	1250	18.4
Children	73	37	3	58	73.7	1250	21.3
Total	**146**	**74**	-	-	**76.1**	-	**23.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	36	18	3	55	67.6	1300	14.8
Males (Adult)	36	18	3	58	70.6	1300	17.8
Children	72	36	3	58	73.6	1300	20.8
Total	**144**	**72**	-	-	**76.0**	-	**23.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 1150 feet	146	74	24.5
@ 1200 feet	146	74	24.1
@ 1250 feet	146	74	23.7
@ 1300 feet	144	72	23.3
Total	**582**	**294**	**29.9**

Fourth & Central
Open Space Noise Calculation

5th Street Pocket Park (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	1300	13.4
Males (Adult)	27	14	3	58	69.5	1300	16.7
Children	54	27	3	58	72.3	1300	19.6
Total	**107**	**54**	-	-	**74.8**	-	**22.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	1375	12.9
Males (Adult)	27	14	3	58	69.5	1375	16.2
Children	54	27	3	58	72.3	1375	19.1
Total	**107**	**54**	-	-	**74.8**	-	**21.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	1450	12.5
Males (Adult)	27	14	3	58	69.5	1450	15.8
Children	54	27	3	58	72.3	1450	18.6
Total	**107**	**54**	-	-	**74.8**	-	**21.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fitness Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	320		
@ 1300 feet	107	54	22.0
@ 1375 feet	107	54	21.5
@ 1450 feet	107	54	21.1
Total	**321**	**162**	**26.4**

Fourth & Central
Open Space Noise Calculation

5th Street Corridor (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1350	15.4
Males (Adult)	43	22	3	58	71.4	1350	18.4
Children	86	43	3	58	74.3	1350	21.3
Total	**172**	**87**	-	-	**76.8**	-	**23.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1475	14.6
Males (Adult)	43	22	3	58	71.4	1475	17.6
Children	86	43	3	58	74.3	1475	20.5
Total	**172**	**87**	-	-	**76.8**	-	**23.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1600	13.9
Males (Adult)	43	22	3	58	71.4	1600	16.9
Children	86	43	3	58	74.3	1600	19.8
Total	**172**	**87**	-	-	**76.8**	-	**22.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Public Plaza Flex Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	514		
@ 1350 feet	172	87	23.7
@ 1475 feet	172	87	23.0
@ 1600 feet	172	87	22.3
Total	**516**	**261**	**27.8**

Fourth & Central
Open Space Noise Calculation

Building 1 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239						
Females (Adult)	309	155	3	55	76.9	536	31.9
Males (Adult)	310	155	3	58	79.9	536	34.9
Children	620	310	3	58	82.9	536	37.9
Total	**1239**	**620**	**-**	**-**	**85.3**	**-**	**40.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	536	48.4

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 1 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239		
@ 536 feet	1239	620	40.3
Amplified Speakers @ 365 feet	-	-	48.4
Total	**1239**	**620**	**49.0**

Fourth & Central
Open Space Noise Calculation

Building 2 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	915						
Females (Adult)	228	114	3	55	75.6	651	28.8
Males (Adult)	229	115	3	58	78.6	651	31.9
Children	458	229	3	58	81.6	651	34.9
Total	**915**	**458**	**-**	**-**	**84.0**	**-**	**37.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	651	46.7

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 2 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	915		
@ 651 feet	915	458	37.3
Amplified Speakers @ 365 feet	-	-	46.7
Total	**915**	**458**	**47.2**

Fourth & Central
Open Space Noise Calculation

Building 5 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	886						
Females (Adult)	221	111	3	55	75.5	899	25.9
Males (Adult)	222	111	3	58	78.5	899	28.9
Children	443	222	3	58	81.5	899	31.9
Total	**886**	**444**	**-**	**-**	**83.9**	**-**	**34.4**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	899	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 5 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	886		
@ 899 feet	886	444	34.4
Amplified Speakers @ 365 feet	-	-	0.0
Total	**886**	**444**	**34.4**

Fourth & Central
Open Space Noise Calculation

Building 6 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	493						
Females (Adult)	123	62	3	55	72.9	1085	21.8
Males (Adult)	124	62	3	58	75.9	1085	24.8
Children	247	124	3	58	78.9	1085	27.8
Total	**494**	**248**	**-**	**-**	**81.4**	**-**	**30.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1085	42.3

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 6 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	493		
@ 1085 feet	494	248	30.2
Amplified Speakers @ 365 feet	-	-	42.3
Total	**494**	**248**	**42.5**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	307						
Females (Adult)	76	38	3	55	70.8	1058	19.9
Males (Adult)	77	39	3	58	73.9	1058	23.0
Children	154	77	3	58	76.9	1058	25.9
Total	**307**	**154**	**-**	**-**	**79.3**	**-**	**28.4**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1058	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	307		
@ 1058 feet	307	154	28.4
Amplified Speakers @ 365 feet	-	-	0.0
Total	**307**	**154**	**28.4**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	720						
Females (Adult)	180	90	3	55	74.5	1152	22.9
Males (Adult)	180	90	3	58	77.5	1152	25.9
Children	360	180	3	58	80.6	1152	28.9
Total	**720**	**360**	**-**	**-**	**83.0**	**-**	**31.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1152	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	720		
@ 1152 feet	720	360	31.3
Amplified Speakers @ 365 feet	-	-	0.0
Total	**720**	**360**	**31.3**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	681						
Females (Adult)	170	85	3	55	74.3	1185	22.4
Males (Adult)	171	86	3	58	77.3	1185	25.4
Children	341	171	3	58	80.3	1185	28.4
Total	**682**	**342**	**-**	**-**	**82.8**	**-**	**30.8**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1185	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	681		
@ 1185 feet	682	342	30.8
Amplified Speakers @ 365 feet	-	-	0.0
Total	**682**	**342**	**30.8**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	367						
Females (Adult)	91	46	3	55	71.6	909	22.0
Males (Adult)	92	46	3	58	74.6	909	25.0
Children	184	92	3	58	77.6	909	28.0
Total	**367**	**184**	**-**	**-**	**80.1**	**-**	**30.4**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	909	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	367		
@ 909 feet	367	184	30.4
Amplified Speakers @ 365 feet	-	-	0.0
Total	**367**	**184**	**30.4**

Fourth & Central

Open Space Noise Calculation

Summary - R2

					Daytime				Nighttime			
Outdoor Space	Capacity	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
4th Street Plazas	678	400	39.9	39.9	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Flex Alley (North)	438	485	35.3	35.3	70.5	70.5	75.5	No	64.8	64.8	69.8	No
4th Street Green	365	330	38.2	38.2	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Central Courtyard	1062	370	41.3	41.3	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Residential Paseo	162	270	35.7	35.7	70.5	70.5	75.5	No	64.8	64.8	69.8	No
The Mews	481	360	38.0	38.0	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Fashion Plaza	514	500	35.8	35.8	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Makers Alley	225	480	33.1	33.1	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Flex Alley (South)	959	640	35.9	35.9	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Pop-up Plaza	579	600	35.2	35.2	70.5	70.5	75.5	No	64.8	64.8	69.8	No
5th Street Pocket Park	320	680	31.6	31.6	70.5	70.5	75.5	No	64.8	64.8	69.8	No
5th Street Corridor	332	650	33.6	33.6	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Building 1 Roof Amenity	1239	546	48.8	48.8	70.5	70.5	75.5	No	64.8	64.9	69.8	No
Building 2 Roof Amenity	915	664	47.0	47.0	70.5	70.5	75.5	No	64.8	64.9	69.8	No
Building 5 Rooftop Deck	886	402	41.4	41.4	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Building 6 Roof Amenity	493	633	47.2	47.2	70.5	70.5	75.5	No	64.8	64.9	69.8	No
Building 7 Rooftop Deck	307	482	35.2	35.2	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Building 9 Level 5 Deck	720	683	35.8	35.8	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Building 9 Rooftop Deck	681	737	35.0	35.0	70.5	70.5	75.5	No	64.8	64.8	69.8	No
Building 10 Rooftop Deck	367	782	31.8	31.8	70.5	70.5	75.5	No	64.8	64.8	69.8	No

Fourth & Central
Open Space Noise Calculation

4th Street Plazas (South)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	400	28.7
Males (Adult)	85	43	3	58	74.3	400	31.8
Children	170	85	3	58	77.3	400	34.8
Total	**339**	**170**	-	-	**79.7**	-	**37.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Northern Landscaped Area (North)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	430	28.1
Males (Adult)	85	43	3	58	74.3	430	31.2
Children	170	85	3	58	77.3	430	34.2
Total	**339**	**170**	-	-	**79.7**	-	**36.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Plazas (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	678		
@ 400 feet	339	170	**37.2**
@ 430 feet	339	170	**36.6**
Total	**678**	**340**	**39.9**

Fourth & Central

Open Space Noise Calculation

Flex Alley North (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	485	23.4
Males (Adult)	37	19	3	58	70.8	485	26.6
Children	73	37	3	58	73.7	485	29.5
Total	**146**	**74**	-	-	**76.1**	-	**32.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	85.0	485	59.2

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	585	21.8
Males (Adult)	36	18	3	58	70.6	585	24.8
Children	73	37	3	58	73.7	585	27.9
Total	**145**	**73**	-	-	**76.1**	-	**30.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	37	19	3	55	67.8	685	20.6
Males (Adult)	37	19	3	58	70.8	685	23.6
Children	73	37	3	58	73.7	685	26.5
Total	**147**	**75**	-	-	**76.2**	-	**29.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	438		
@ 485 feet	146	74	32.0
@ 585 feet	145	73	30.3
@ 685 feet	147	75	29.0
Total	**438**	**222**	**35.3**

Fourth & Central
Open Space Noise Calculation

4th Street Green (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	330	25.9
Males (Adult)	31	16	3	58	70.0	330	29.2
Children	61	31	3	58	72.9	330	32.1
Total	**122**	**62**	-	-	**75.4**	-	**34.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	65.0	330	42.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	380	24.7
Males (Adult)	30	15	3	58	69.8	380	27.7
Children	61	31	3	58	72.9	380	30.9
Total	**121**	**61**	-	-	**75.3**	-	**33.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	121						
Females (Adult)	31	16	3	55	67.0	430	23.9
Males (Adult)	31	16	3	58	70.0	430	26.9
Children	61	31	3	58	72.9	430	29.8
Total	**123**	**63**	-	-	**75.4**	-	**32.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	365		
@ 330 feet	122	62	34.5
@ 380 feet	121	61	33.2
@ 430 feet	123	63	32.3
Total	**366**	**186**	**38.2**

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	370	27.5
Males (Adult)	54	27	3	58	72.3	370	30.5
Children	107	54	3	58	75.3	370	33.5
Total	**214**	**108**	-	-	**77.8**	-	**35.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	420	26.4
Males (Adult)	54	27	3	58	72.3	420	29.4
Children	107	54	3	58	75.3	420	32.4
Total	**214**	**108**	-	-	**77.8**	-	**34.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	520	24.5
Males (Adult)	54	27	3	58	72.3	520	27.5
Children	107	54	3	58	75.3	520	30.5
Total	**214**	**108**	-	-	**77.8**	-	**33.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	420	26.4
Males (Adult)	54	27	3	58	72.3	420	29.4
Children	107	54	3	58	75.3	420	32.4
Total	**214**	**108**	-	-	**77.8**	-	**34.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	620	23.0
Males (Adult)	54	27	3	58	72.3	620	26.0
Children	107	54	3	58	75.3	620	29.0
Total	**214**	**108**	-	-	**77.8**	-	**31.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	1062		
@ 370 feet	214	108	35.9
@ 420 feet	214	108	34.8
@ 520 feet	214	108	33.0
@ 420 feet	214	108	34.8
@ 620 feet	214	108	31.5
Total	**1070**	**540**	**41.3**

Fourth & Central
Open Space Noise Calculation

Residential Paseo (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	270	24.4
Males (Adult)	14	7	3	58	66.5	270	27.4
Children	27	14	3	58	69.5	270	30.4
Total	**54**	**28**	-	-	**71.9**	-	**32.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	355	22.0
Males (Adult)	14	7	3	58	66.5	355	25.0
Children	27	14	3	58	69.5	355	28.0
Total	**54**	**28**	-	-	**71.9**	-	**30.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	440	20.1
Males (Adult)	14	7	3	58	66.5	440	23.1
Children	27	14	3	58	69.5	440	26.1
Total	**54**	**28**	-	-	**71.9**	-	**28.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	162		
@ 270 feet	54	28	32.8
@ 355 feet	54	28	30.4
@ 440 feet	54	28	28.6
Total	**162**	**84**	**35.7**

Fourth & Central
Open Space Noise Calculation

The Mews (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	360	26.4
Males (Adult)	41	21	3	58	71.2	360	29.6
Children	81	41	3	58	74.1	360	32.5
Total	**162**	**82**	-	-	**76.6**	-	**35.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	460	24.3
Males (Adult)	41	21	3	58	71.2	460	27.5
Children	81	41	3	58	74.1	460	30.4
Total	**162**	**82**	-	-	**76.6**	-	**32.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	160						
Females (Adult)	40	20	3	55	68.0	560	22.6
Males (Adult)	40	20	3	58	71.0	560	25.6
Children	80	40	3	58	74.0	560	28.6
Total	**160**	**80**	-	-	**76.5**	-	**31.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	481		
@ 360 feet	162	82	35.0
@ 460 feet	162	82	**32.9**
@ 560 feet	160	80	31.0
Total Day	**484**	**244**	**38.0**

Fourth & Central

Open Space Noise Calculation

Fashion Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	500	24.0
Males (Adult)	43	22	3	58	71.4	500	27.0
Children	86	43	3	58	74.3	500	29.9
Total	**172**	**87**	-	-	**76.8**	-	**32.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	600	22.2
Males (Adult)	42	21	3	58	71.2	600	25.2
Children	86	43	3	58	74.3	600	28.3
Total	**170**	**85**	-	-	**76.7**	-	**30.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	700	20.9
Males (Adult)	42	21	3	58	71.2	700	23.9
Children	86	43	3	58	74.3	700	27.0
Total	**170**	**85**	-	-	**76.7**	-	**29.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	514		
@ 500 feet	172	87	32.4
@ 600 feet	170	85	**30.7**
@ 700 feet	170	85	29.4
Total Night	**512**	**257**	**35.8**

Fourth & Central
Open Space Noise Calculation

Makers Alley (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	480	20.5
Males (Adult)	19	10	3	58	68.0	480	23.9
Children	38	19	3	58	70.8	480	26.7
Total	**75**	**38**	-	-	**73.3**	-	**29.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	530	19.6
Males (Adult)	19	10	3	58	68.0	530	23.1
Children	38	19	3	58	70.8	530	25.8
Total	**75**	**38**	-	-	**73.3**	-	**28.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	580	18.8
Males (Adult)	18	9	3	58	67.5	580	21.8
Children	38	19	3	58	70.8	580	25.1
Total	**74**	**37**	-	-	**73.1**	-	**27.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Mesquit Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	225		
@ 480 feet	75	38	29.2
@ 530 feet	75	38	**28.3**
@ 580 feet	74	37	27.4
Total	**224**	**113**	**33.1**

Fourth & Central
Open Space Noise Calculation

Flex Alley South (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	640	27.4
Males (Adult)	160	80	3	58	77.0	640	30.4
Total	**320**	**160**	-	-	**78.8**	-	**32.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	740	26.2
Males (Adult)	160	80	3	58	77.0	740	29.2
Total	**320**	**160**	-	-	**78.8**	-	**31.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	840	25.1
Males (Adult)	160	80	3	58	77.0	840	28.1
Total	**320**	**160**	-	-	**78.8**	-	**29.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	959		
@ 640 feet	320	160	32.2
@ 740 feet	320	160	31.0
@ 840 feet	320	160	29.9
Total	**960**	**480**	**35.9**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	600	21.5
Males (Adult)	37	19	3	58	70.8	600	24.8
Children	73	37	3	58	73.7	600	27.7
Total	**146**	**74**	-	-	**76.1**	-	**30.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	650	20.8
Males (Adult)	37	19	3	58	70.8	650	24.1
Children	73	37	3	58	73.7	650	27.0
Total	**146**	**74**	-	-	**76.1**	-	**29.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	700	20.2
Males (Adult)	37	19	3	58	70.8	700	23.4
Children	73	37	3	58	73.7	700	26.3
Total	**146**	**74**	-	-	**76.1**	-	**28.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	36	18	3	55	67.6	750	19.6
Males (Adult)	36	18	3	58	70.6	750	22.6
Children	72	36	3	58	73.6	750	25.6
Total	**144**	**72**	-	-	**76.0**	-	**28.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 600 feet	146	74	30.1
@ 650 feet	146	74	29.4
@ 700 feet	146	74	28.8
@ 750 feet	144	72	28.0
Total	**582**	**294**	**35.2**

Fourth & Central
Open Space Noise Calculation

5th Street Pocket Park (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	680	19.0
Males (Adult)	27	14	3	58	69.5	680	22.4
Children	54	27	3	58	72.3	680	25.2
Total	**107**	**54**	-	-	**74.8**	-	**27.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	755	18.1
Males (Adult)	27	14	3	58	69.5	755	21.4
Children	54	27	3	58	72.3	755	24.3
Total	**107**	**54**	-	-	**74.8**	-	**26.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	830	17.3
Males (Adult)	27	14	3	58	69.5	830	20.6
Children	54	27	3	58	72.3	830	23.5
Total	**107**	**54**	-	-	**74.8**	-	**25.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fitness Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	320		
@ 680 feet	107	54	27.7
@ 755 feet	107	54	26.8
@ 830 feet	107	54	25.9
Total	**321**	**162**	**31.6**

Fourth & Central
Open Space Noise Calculation

5th Street Corridor (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	650	21.7
Males (Adult)	43	22	3	58	71.4	650	24.7
Children	86	43	3	58	74.3	650	27.6
Total	**172**	**87**	-	-	**76.8**	-	**30.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	775	20.2
Males (Adult)	43	22	3	58	71.4	775	23.2
Children	86	43	3	58	74.3	775	26.1
Total	**172**	**87**	-	-	**76.8**	-	**28.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	900	18.9
Males (Adult)	43	22	3	58	71.4	900	21.9
Children	86	43	3	58	74.3	900	24.8
Total	**172**	**87**	-	-	**76.8**	-	**27.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Public Plaza Flex Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	514		
@ 650 feet	172	87	30.1
@ 775 feet	172	87	28.6
@ 900 feet	172	87	27.3
Total	**516**	**261**	**33.6**

Fourth & Central
Open Space Noise Calculation

Building 1 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239						
Females (Adult)	309	155	3	55	76.9	546	31.7
Males (Adult)	310	155	3	58	79.9	546	34.7
Children	620	310	3	58	82.9	546	37.7
Total	**1239**	**620**	**-**	**-**	**85.3**	**-**	**40.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	546	48.2

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 1 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239		
@ 546 feet	1239	620	40.1
Amplified Speakers @ 365 feet	-	-	48.2
Total	**1239**	**620**	**48.8**

Fourth & Central
Open Space Noise Calculation

Building 2 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	915						
Females (Adult)	228	114	3	55	75.6	664	28.7
Males (Adult)	229	115	3	58	78.6	664	31.7
Children	458	229	3	58	81.6	664	34.7
Total	**915**	**458**	**-**	**-**	**84.0**	**-**	**37.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	664	46.5

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 2 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	915		
@ 664 feet	915	458	37.1
Amplified Speakers @ 365 feet	-	-	46.5
Total	**915**	**458**	**47.0**

Fourth & Central
Open Space Noise Calculation

Building 5 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	886						
Females (Adult)	221	111	3	55	75.5	402	32.9
Males (Adult)	222	111	3	58	78.5	402	35.9
Children	443	222	3	58	81.5	402	38.9
Total	**886**	**444**	**-**	**-**	**83.9**	**-**	**41.4**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	402	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 5 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	886		
@ 402 feet	886	444	41.4
Amplified Speakers @ 365 feet	-	-	0.0
Total	**886**	**444**	**41.4**

Fourth & Central
Open Space Noise Calculation

Building 6 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	493						
Females (Adult)	123	62	3	55	72.9	633	26.4
Males (Adult)	124	62	3	58	75.9	633	29.4
Children	247	124	3	58	78.9	633	32.4
Total	**494**	**248**	**-**	**-**	**81.4**	**-**	**34.9**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	633	46.9

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 6 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity @ 633 feet	493 494	248	34.9
Amplified Speakers @ 365 feet	-	-	46.9
Total	**494**	**248**	**47.2**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	307						
Females (Adult)	76	38	3	55	70.8	482	26.7
Males (Adult)	77	39	3	58	73.9	482	29.8
Children	154	77	3	58	76.9	482	32.7
Total	**307**	**154**	**-**	**-**	**79.3**	**-**	**35.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	482	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	307		
@ 482 feet	307	154	35.2
Amplified Speakers @ 365 feet	-	-	0.0
Total	**307**	**154**	**35.2**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	720						
Females (Adult)	180	90	3	55	74.5	683	27.4
Males (Adult)	180	90	3	58	77.5	683	30.4
Children	360	180	3	58	80.6	683	33.4
Total	**720**	**360**	**-**	**-**	**83.0**	**-**	**35.8**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	683	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	720		
@ 683 feet	720	360	35.8
Amplified Speakers @ 365 feet	-	-	0.0
Total	**720**	**360**	**35.8**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	681						
Females (Adult)	170	85	3	55	74.3	737	26.5
Males (Adult)	171	86	3	58	77.3	737	29.5
Children	341	171	3	58	80.3	737	32.5
Total	**682**	**342**	**-**	**-**	**82.8**	**-**	**35.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	737	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	681		
@ 737 feet	682	342	35.0
Amplified Speakers @ 365 feet	-	-	0.0
Total	**682**	**342**	**35.0**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	367						
Females (Adult)	91	46	3	55	71.6	782	23.3
Males (Adult)	92	46	3	58	74.6	782	26.3
Children	184	92	3	58	77.6	782	29.3
Total	**367**	**184**	**-**	**-**	**80.1**	**-**	**31.7**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	782	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	367		
@ 782 feet	367	184	31.7
Amplified Speakers @ 365 feet	-	-	0.0
Total	**367**	**184**	**31.8**

Fourth & Central

Open Space Noise Calculation

Summary - R3

Outdoor Space	Capacity	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
4th Street Plazas	678	1130	31.1	31.1	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Flex Alley (North)	438	1050	29.3	29.3	58.5	58.5	63.5	No	61.8	61.8	66.8	No
4th Street Green	365	1175	27.9	27.9	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Central Courtyard	1062	1080	32.9	32.9	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Residential Paseo	162	1150	24.4	24.4	58.5	58.5	63.5	No	61.8	61.8	66.8	No
The Mews	481	930	30.7	30.7	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Fashion Plaza	514	850	31.6	31.6	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Makers Alley	225	1000	27.1	27.1	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Flex Alley (South)	959	750	34.6	34.6	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Pop-up Plaza	579	830	32.6	32.6	58.5	58.5	63.5	No	61.8	61.8	66.8	No
5th Street Pocket Park	320	845	29.9	29.9	58.5	58.5	63.5	No	61.8	61.8	66.8	No
5th Street Corridor	332	660	33.5	33.5	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Building 1 Roof Amenity	1239	1303	41.3	41.3	58.5	58.6	63.5	No	61.8	61.8	66.8	No
Building 2 Roof Amenity	915	1486	40.0	40.0	58.5	58.6	63.5	No	61.8	61.8	66.8	No
Building 5 Rooftop Deck	886	1163	32.1	32.1	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Building 6 Roof Amenity	493	722	46.1	46.1	58.5	58.7	63.5	No	61.8	61.9	66.8	No
Building 7 Rooftop Deck	307	983	29.0	29.0	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Building 9 Level 5 Deck	720	588	37.1	37.1	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Building 9 Rooftop Deck	681	651	36.0	36.0	58.5	58.5	63.5	No	61.8	61.8	66.8	No
Building 10 Rooftop Deck	367	899	30.5	30.5	58.5	58.5	63.5	No	61.8	61.8	66.8	No

Fourth & Central
Open Space Noise Calculation

4th Street Plazas (South)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	1130	19.7
Males (Adult)	85	43	3	58	74.3	1130	22.8
Children	170	85	3	58	77.3	1130	25.8
Total	**339**	**170**	-	-	**79.7**	-	**28.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Northern Landscaped Area (North)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	1160	19.5
Males (Adult)	85	43	3	58	74.3	1160	22.6
Children	170	85	3	58	77.3	1160	25.5
Total	**339**	**170**	-	-	**79.7**	-	**28.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Plazas (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	678		
@ 1130 feet	339	170	**28.2**
@ 1160 feet	339	170	**28.0**
Total	**678**	**340**	**31.1**

Fourth & Central
Open Space Noise Calculation

Flex Alley North (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	1050	16.7
Males (Adult)	37	19	3	58	70.8	1050	19.9
Children	73	37	3	58	73.7	1050	22.8
Total	**146**	**74**	-	-	**76.1**	-	**25.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	85.0	1050	52.5

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	1150	15.9
Males (Adult)	36	18	3	58	70.6	1150	18.9
Children	73	37	3	58	73.7	1150	22.0
Total	**145**	**73**	-	-	**76.1**	-	**24.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	146						
Females (Adult)	37	19	3	55	67.8	1250	15.4
Males (Adult)	37	19	3	58	70.8	1250	18.4
Children	73	37	3	58	73.7	1250	21.3
Total	**147**	**75**	-	-	**76.2**	-	**23.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	438		
@ 1050 feet	146	74	25.2
@ 1150 feet	145	73	24.4
@ 1250 feet	147	75	23.8
Total	**438**	**222**	**29.3**

Fourth & Central

Open Space Noise Calculation

4th Street Green (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	1175	14.9
Males (Adult)	31	16	3	58	70.0	1175	18.2
Children	61	31	3	58	72.9	1175	21.1
Total	**122**	**62**	-	-	**75.4**	-	**23.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	65.0	1175	31.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	1225	14.5
Males (Adult)	30	15	3	58	69.8	1225	17.5
Children	61	31	3	58	72.9	1225	20.7
Total	**121**	**61**	-	-	**75.3**	-	**23.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	121						
Females (Adult)	31	16	3	55	67.0	1275	14.5
Males (Adult)	31	16	3	58	70.0	1275	17.5
Children	61	31	3	58	72.9	1275	20.3
Total	**123**	**63**	-	-	**75.4**	-	**22.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	365		
@ 1175 feet	122	62	23.5
@ 1225 feet	121	61	23.1
@ 1275 feet	123	63	22.8
Total	**366**	**186**	**27.9**

Fourth & Central

Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	1080	18.2
Males (Adult)	54	27	3	58	72.3	1080	21.2
Children	107	54	3	58	75.3	1080	24.2
Total	**214**	**108**	-	-	**77.8**	-	**26.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	1130	17.8
Males (Adult)	54	27	3	58	72.3	1130	20.8
Children	107	54	3	58	75.3	1130	23.8
Total	**214**	**108**	-	-	**77.8**	-	**26.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	1230	17.1
Males (Adult)	54	27	3	58	72.3	1230	20.1
Children	107	54	3	58	75.3	1230	23.1
Total	**214**	**108**	-	-	**77.8**	-	**25.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	1130	17.8
Males (Adult)	54	27	3	58	72.3	1130	20.8
Children	107	54	3	58	75.3	1130	23.8
Total	**214**	**108**	-	-	**77.8**	-	**26.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	1330	16.4
Males (Adult)	54	27	3	58	72.3	1330	19.4
Children	107	54	3	58	75.3	1330	22.4
Total	**214**	**108**	-	-	**77.8**	-	**24.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 1080 feet	214	108	26.6
@ 1130 feet	214	108	26.2
@ 1230 feet	214	108	25.5
@ 1130 feet	214	108	26.2
@ 1330 feet	214	108	24.8
Total	**1070**	**540**	**32.9**

Fourth & Central
Open Space Noise Calculation

Residential Paseo (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	1150	11.8
Males (Adult)	14	7	3	58	66.5	1150	14.8
Children	27	14	3	58	69.5	1150	17.8
Total	**54**	**28**	-	-	**71.9**	-	**20.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	1235	11.2
Males (Adult)	14	7	3	58	66.5	1235	14.2
Children	27	14	3	58	69.5	1235	17.2
Total	**54**	**28**	-	-	**71.9**	-	**19.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	1320	10.6
Males (Adult)	14	7	3	58	66.5	1320	13.6
Children	27	14	3	58	69.5	1320	16.6
Total	**54**	**28**	-	-	**71.9**	-	**19.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	162		
@ 1150 feet	54	28	20.2
@ 1235 feet	54	28	19.6
@ 1320 feet	54	28	19.0
Total	**162**	**84**	**24.4**

Fourth & Central
Open Space Noise Calculation

The Mews (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	930	18.2
Males (Adult)	41	21	3	58	71.2	930	21.4
Children	81	41	3	58	74.1	930	24.3
Total	**162**	**82**	-	-	**76.6**	-	**26.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	1030	17.3
Males (Adult)	41	21	3	58	71.2	1030	20.5
Children	81	41	3	58	74.1	1030	23.4
Total	**162**	**82**	-	-	**76.6**	-	**25.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	160						
Females (Adult)	40	20	3	55	68.0	1130	16.5
Males (Adult)	40	20	3	58	71.0	1130	19.5
Children	80	40	3	58	74.0	1130	22.5
Total	**160**	**80**	-	-	**76.5**	-	**24.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	481		
@ 930 feet	162	82	26.7
@ 1030 feet	162	82	**25.9**
@ 1130 feet	160	80	24.9
Total Day	**484**	**244**	**30.7**

Fourth & Central
Open Space Noise Calculation

Fashion Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	850	19.4
Males (Adult)	43	22	3	58	71.4	850	22.4
Children	86	43	3	58	74.3	850	25.3
Total	**172**	**87**	-	-	**76.8**	-	**27.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	950	18.2
Males (Adult)	42	21	3	58	71.2	950	21.2
Children	86	43	3	58	74.3	950	24.3
Total	**170**	**85**	-	-	**76.7**	-	**26.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	1050	17.3
Males (Adult)	42	21	3	58	71.2	1050	20.3
Children	86	43	3	58	74.3	1050	23.5
Total	**170**	**85**	-	-	**76.7**	-	**25.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	514		
@ 850 feet	172	87	27.8
@ 950 feet	170	85	**26.7**
@ 1050 feet	170	85	25.8
Total Night	**512**	**257**	**31.6**

Fourth & Central
Open Space Noise Calculation

Makers Alley (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1000	14.1
Males (Adult)	19	10	3	58	68.0	1000	17.5
Children	38	19	3	58	70.8	1000	20.3
Total	**75**	**38**	-	-	**73.3**	-	**22.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1050	13.7
Males (Adult)	19	10	3	58	68.0	1050	17.1
Children	38	19	3	58	70.8	1050	19.9
Total	**75**	**38**	-	-	**73.3**	-	**22.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1100	13.3
Males (Adult)	18	9	3	58	67.5	1100	16.3
Children	38	19	3	58	70.8	1100	19.5
Total	**74**	**37**	-	-	**73.1**	-	**21.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Mesquit Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	225		
@ 1000 feet	75	38	22.8
@ 1050 feet	75	38	**22.4**
@ 1100 feet	74	37	21.8
Total	**224**	**113**	**27.1**

Fourth & Central

Open Space Noise Calculation

Flex Alley South (Western Boundary)

Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	750	26.1
Males (Adult)	160	80	3	58	77.0	750	29.1
Total	**320**	**160**	-	-	**78.8**	-	**30.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Center)

Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	850	25.0
Males (Adult)	160	80	3	58	77.0	850	28.0
Total	**320**	**160**	-	-	**78.8**	-	**29.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Eastern Boundary)

Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	950	24.0
Males (Adult)	160	80	3	58	77.0	950	27.0
Total	**320**	**160**	-	-	**78.8**	-	**28.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Total)

Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	959		
@ 750 feet	320	160	30.8
@ 850 feet	320	160	29.7
@ 950 feet	320	160	28.8
Total	**960**	**480**	**34.6**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	830	18.7
Males (Adult)	37	19	3	58	70.8	830	21.9
Children	73	37	3	58	73.7	830	24.8
Total	**146**	**74**	-	-	**76.1**	-	**27.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	880	18.2
Males (Adult)	37	19	3	58	70.8	880	21.4
Children	73	37	3	58	73.7	880	24.3
Total	**146**	**74**	-	-	**76.1**	-	**26.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	930	17.7
Males (Adult)	37	19	3	58	70.8	930	21.0
Children	73	37	3	58	73.7	930	23.9
Total	**146**	**74**	-	-	**76.1**	-	**26.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	36	18	3	55	67.6	980	17.3
Males (Adult)	36	18	3	58	70.6	980	20.3
Children	72	36	3	58	73.6	980	23.3
Total	**144**	**72**	-	-	**76.0**	-	**25.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 830 feet	146	74	27.3
@ 880 feet	146	74	26.8
@ 930 feet	146	74	26.3
@ 980 feet	144	72	25.7
Total	**582**	**294**	**32.6**

Fourth & Central
Open Space Noise Calculation

5th Street Pocket Park (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	845	17.1
Males (Adult)	27	14	3	58	69.5	845	20.5
Children	54	27	3	58	72.3	845	23.3
Total	**107**	**54**	-	-	**74.8**	-	**25.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	920	16.4
Males (Adult)	27	14	3	58	69.5	920	19.7
Children	54	27	3	58	72.3	920	22.6
Total	**107**	**54**	-	-	**74.8**	-	**25.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	995	15.7
Males (Adult)	27	14	3	58	69.5	995	19.0
Children	54	27	3	58	72.3	995	21.9
Total	**107**	**54**	-	-	**74.8**	-	**24.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fitness Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	320		
@ 845 feet	107	54	25.8
@ 920 feet	107	54	25.0
@ 995 feet	107	54	24.4
Total	**321**	**162**	**29.9**

Fourth & Central

Open Space Noise Calculation

5th Street Corridor (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	660	21.6
Males (Adult)	43	22	3	58	71.4	660	24.6
Children	86	43	3	58	74.3	660	27.5
Total	**172**	**87**	-	-	**76.8**	-	**30.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	785	20.1
Males (Adult)	43	22	3	58	71.4	785	23.1
Children	86	43	3	58	74.3	785	26.0
Total	**172**	**87**	-	-	**76.8**	-	**28.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	910	18.8
Males (Adult)	43	22	3	58	71.4	910	21.8
Children	86	43	3	58	74.3	910	24.7
Total	**172**	**87**	-	-	**76.8**	-	**27.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Public Plaza Flex Deck (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	514		
@ 660 feet	172	87	30.0
@ 785 feet	172	87	28.5
@ 910 feet	172	87	27.2
Total	**516**	**261**	**33.5**

Fourth & Central
Open Space Noise Calculation

Building 1 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239						
Females (Adult)	309	155	3	55	76.9	1303	24.1
Males (Adult)	310	155	3	58	79.9	1303	27.1
Children	620	310	3	58	82.9	1303	30.2
Total	**1239**	**620**	**-**	**-**	**85.3**	**-**	**32.6**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1303	40.7

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 1 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239		
@ 1303 feet	1239	620	32.6
Amplified Speakers @ 365 feet	-	-	40.7
Total	**1239**	**620**	**41.3**

Fourth & Central
Open Space Noise Calculation

Building 2 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	915						
Females (Adult)	228	114	3	55	75.6	1486	21.7
Males (Adult)	229	115	3	58	78.6	1486	24.7
Children	458	229	3	58	81.6	1486	27.7
Total	**915**	**458**	**-**	**-**	**84.0**	**-**	**30.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1486	39.5

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 2 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	915		
@ 1486 feet	915	458	30.1
Amplified Speakers @ 365 feet	-	-	39.5
Total	**915**	**458**	**40.0**

Fourth & Central
Open Space Noise Calculation

Building 5 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	886						
Females (Adult)	221	111	3	55	75.5	1163	23.7
Males (Adult)	222	111	3	58	78.5	1163	26.7
Children	443	222	3	58	81.5	1163	29.7
Total	**886**	**444**	**-**	**-**	**83.9**	**-**	**32.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1163	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 5 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	886		
@ 1163 feet	886	444	32.1
Amplified Speakers @ 365 feet	-	-	0.0
Total	**886**	**444**	**32.1**

Fourth & Central
Open Space Noise Calculation

Building 6 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	493						
Females (Adult)	123	62	3	55	72.9	722	25.3
Males (Adult)	124	62	3	58	75.9	722	28.3
Children	247	124	3	58	78.9	722	31.3
Total	**494**	**248**	**-**	**-**	**81.4**	**-**	**33.7**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	722	45.8

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 6 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity @ 722 feet	493 494	248	33.7
Amplified Speakers @ 365 feet	-	-	45.8
Total	**494**	**248**	**46.1**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	307						
Females (Adult)	76	38	3	55	70.8	983	20.5
Males (Adult)	77	39	3	58	73.9	983	23.6
Children	154	77	3	58	76.9	983	26.6
Total	**307**	**154**	**-**	**-**	**79.3**	**-**	**29.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	983	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	307		
@ 983 feet	307	154	29.0
Amplified Speakers @ 365 feet	-	-	0.0
Total	**307**	**154**	**29.0**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	720						
Females (Adult)	180	90	3	55	74.5	588	28.7
Males (Adult)	180	90	3	58	77.5	588	31.7
Children	360	180	3	58	80.6	588	34.7
Total	**720**	**360**	**-**	**-**	**83.0**	**-**	**37.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	588	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	720		
@ 588 feet	720	360	37.1
Amplified Speakers @ 365 feet	-	-	0.0
Total	**720**	**360**	**37.1**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	681						
Females (Adult)	170	85	3	55	74.3	651	27.6
Males (Adult)	171	86	3	58	77.3	651	30.6
Children	341	171	3	58	80.3	651	33.6
Total	**682**	**342**	**-**	**-**	**82.8**	**-**	**36.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	651	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	681		
@ 651 feet	682	342	36.0
Amplified Speakers @ 365 feet	-	-	0.0
Total	**682**	**342**	**36.0**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	367						
Females (Adult)	91	46	3	55	71.6	899	22.1
Males (Adult)	92	46	3	58	74.6	899	25.1
Children	184	92	3	58	77.6	899	28.1
Total	**367**	**184**	**-**	**-**	**80.1**	**-**	**30.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	899	0.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	367		
@ 899 feet	367	184	30.5
Amplified Speakers @ 365 feet	-	-	0.0
Total	**367**	**184**	**30.5**

Fourth & Central

Open Space Noise Calculation

Summary - R4

					Daytime				Nighttime			
Outdoor Space	Capacity	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
4th Street Plazas	678	560	37.1	37.1	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Flex Alley (North)	438	530	34.7	34.7	70.2	70.2	75.2	No	66.7	66.7	71.7	No
4th Street Green	365	780	31.3	31.3	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Central Courtyard	1062	640	37.1	37.1	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Residential Paseo	162	790	27.5	27.5	70.2	70.2	75.2	No	66.7	66.7	71.7	No
The Mews	481	450	36.3	36.3	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Fashion Plaza	514	650	33.7	33.7	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Makers Alley	225	760	29.4	29.4	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Flex Alley (South)	959	460	38.4	38.4	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Pop-up Plaza	579	830	31.2	31.2	70.2	70.2	75.2	No	66.7	66.7	71.7	No
5th Street Pocket Park	320	700	31.4	31.4	70.2	70.2	75.2	No	66.7	66.7	71.7	No
5th Street Corridor	332	515	35.3	35.3	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Building 1 Roof Amenity	1239	655	47.3	47.3	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Building 2 Roof Amenity	915	900	44.3	44.3	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Building 5 Rooftop Deck	886	815	35.2	35.2	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Building 6 Roof Amenity	493	470	49.8	49.8	70.2	70.2	75.2	No	66.7	66.8	71.7	No
Building 7 Rooftop Deck	307	751	31.3	31.3	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Building 9 Level 5 Deck	720	518	38.2	38.2	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Building 9 Rooftop Deck	681	589	36.9	36.9	70.2	70.2	75.2	No	66.7	66.7	71.7	No
Building 10 Rooftop Deck	367	293	40.3	40.3	70.2	70.2	75.2	No	66.7	66.7	71.7	No

Fourth & Central
Open Space Noise Calculation

4th Street Plazas (South)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	560	25.8
Males (Adult)	85	43	3	58	74.3	560	28.9
Children	170	85	3	58	77.3	560	31.9
Total	**339**	**170**	-	-	**79.7**	-	**34.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Northern Landscaped Area (North)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	590	25.4
Males (Adult)	85	43	3	58	74.3	590	28.5
Children	170	85	3	58	77.3	590	31.4
Total	**339**	**170**	-	-	**79.7**	-	**33.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Plazas (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	678		
@ 560 feet	339	170	**34.3**
@ 590 feet	339	170	**33.9**
Total	**678**	**340**	**37.1**

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	640	22.7
Males (Adult)	54	27	3	58	72.3	640	25.7
Children	107	54	3	58	75.3	640	28.7
Total	**214**	**108**	-	-	**77.8**	-	**31.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	690	22.1
Males (Adult)	54	27	3	58	72.3	690	25.1
Children	107	54	3	58	75.3	690	28.1
Total	**214**	**108**	-	-	**77.8**	-	**30.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	790	20.9
Males (Adult)	54	27	3	58	72.3	790	23.9
Children	107	54	3	58	75.3	790	26.9
Total	**214**	**108**	-	-	**77.8**	-	**29.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	690	22.1
Males (Adult)	54	27	3	58	72.3	690	25.1
Children	107	54	3	58	75.3	690	28.1
Total	**214**	**108**	-	-	**77.8**	-	**30.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	890	19.9
Males (Adult)	54	27	3	58	72.3	890	22.9
Children	107	54	3	58	75.3	890	25.9
Total	**214**	**108**	-	-	**77.8**	-	**28.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	1062		
@ 640 feet	214	108	31.2
@ 690 feet	214	108	30.5
@ 790 feet	214	108	29.3
@ 690 feet	214	108	30.5
@ 890 feet	214	108	28.3
Amplified Speakers			0.0
Total	**1070**	**540**	**37.1**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	830	18.7
Males (Adult)	37	19	3	58	70.8	830	21.9
Children	73	37	4	58	73.7	830	27.3
Total	**146**	**74**	-	-	**76.1**	-	**28.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	880	18.2
Males (Adult)	37	19	3	58	70.8	880	21.4
Children	73	37	4	58	73.7	880	
Total	**146**	**74**	-	-	**76.1**	-	**23.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	930	17.7
Males (Adult)	37	19	3	58	70.8	930	21.0
Children	73	37	4	58	73.7	930	
Total	**146**	**74**	-	-	**76.1**	-	**22.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	36	18	3	55	67.6	980	17.3
Males (Adult)	36	18	3	58	70.6	980	20.3
Children	72	36	4	58	73.6	980	
Total	**144**	**72**	-	-	**76.0**	-	**22.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 830 feet	146	74	28.9
@ 880 feet	146	74	23.1
@ 930 feet	146	74	22.7
@ 980 feet	144	72	22.1
Total	**582**	**294**	**31.2**

Fourth & Central
Open Space Noise Calculation

Building 1 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239						
Females (Adult)	309	155	3	55	76.9	655	30.1
Males (Adult)	310	155	3	58	79.9	655	33.1
Children	620	310	3	58	82.9	655	36.1
Total	**1239**	**620**	**-**	**-**	**85.3**	**-**	**38.6**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	655	46.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 1 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239		
@ 655 feet	1239	620	38.6
Amplified Speakers @ 365 feet	-	-	46.6
Total	**1239**	**620**	**47.3**

Fourth & Central
Open Space Noise Calculation

Building 2 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	915						
Females (Adult)	228	114	3	55	75.6	900	26.0
Males (Adult)	229	115	3	58	78.6	900	29.1
Children	458	229	3	58	81.6	900	32.1
Total	**915**	**458**	**-**	**-**	**84.0**	**-**	**34.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	900	43.9

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 2 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	915		
@ 900 feet	915	458	34.5
Amplified Speakers @ 365 feet	-	-	43.9
Total	**915**	**458**	**44.3**

Fourth & Central
Open Space Noise Calculation

Building 5 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	886						
Females (Adult)	221	111	3	55	75.5	815	26.8
Males (Adult)	222	111	3	58	78.5	815	29.8
Children	443	222	3	58	81.5	815	32.8
Total	**886**	**444**	**-**	**-**	**83.9**	**-**	**35.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	815	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 5 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	886		
@ 815 feet	886	444	35.2
Amplified Speakers @ 365 feet	-	-	0.0
Total	**886**	**444**	**35.2**

Fourth & Central
Open Space Noise Calculation

Building 6 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	493						
Females (Adult)	123	62	3	55	72.9	470	29.0
Males (Adult)	124	62	3	58	75.9	470	32.0
Children	247	124	3	58	78.9	470	35.0
Total	**494**	**248**	**-**	**-**	**81.4**	**-**	**37.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	470	49.5

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 6 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	493		
@ 470 feet	494	248	37.5
Amplified Speakers @ 365 feet	-	-	49.5
Total	**494**	**248**	**49.8**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	307						
Females (Adult)	76	38	3	55	70.8	751	22.8
Males (Adult)	77	39	3	58	73.9	751	25.9
Children	154	77	3	58	76.9	751	28.9
Total	**307**	**154**	**-**	**-**	**79.3**	**-**	**31.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	751	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	307		
@ 751 feet	307	154	31.3
Amplified Speakers @ 365 feet	-	-	0.0
Total	**307**	**154**	**31.3**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	720						
Females (Adult)	180	90	3	55	74.5	518	29.8
Males (Adult)	180	90	3	58	77.5	518	32.8
Children	360	180	3	58	80.6	518	35.8
Total	**720**	**360**	**-**	**-**	**83.0**	**-**	**38.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	518	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	720		
@ 518 feet	720	360	38.2
Amplified Speakers @ 365 feet	-	-	0.0
Total	**720**	**360**	**38.2**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	681						
Females (Adult)	170	85	3	55	74.3	589	28.4
Males (Adult)	171	86	3	58	77.3	589	31.5
Children	341	171	3	58	80.3	589	34.5
Total	**682**	**342**	**-**	**-**	**82.8**	**-**	**36.9**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	589	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	681		
@ 589 feet	682	342	36.9
Amplified Speakers @ 365 feet	-	-	0.0
Total	**682**	**342**	**36.9**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	367						
Females (Adult)	91	46	3	55	71.6	293	31.8
Males (Adult)	92	46	3	58	74.6	293	34.8
Children	184	92	3	58	77.6	293	37.8
Total	**367**	**184**	**-**	**-**	**80.1**	**-**	**40.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	293	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	367		
@ 293 feet	367	184	40.3
Amplified Speakers @ 365 feet	-	-	0.0
Total	**367**	**184**	**40.3**

Fourth & Central

Open Space Noise Calculation

Summary - R5

Outdoor Space	Capacity	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
4th Street Plazas	678	200	45.7	45.7	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Flex Alley (North)	438	250	40.3	40.3	69.7	69.7	74.7	No	71.2	71.2	76.2	No
4th Street Green	365	490	35.1	35.1	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Central Courtyard	1062	435	40.0	40.0	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Residential Paseo	162	540	30.5	30.5	69.7	69.7	74.7	No	71.2	71.2	76.2	No
The Mews	481	480	35.9	35.9	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Fashion Plaza	514	540	35.2	35.2	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Makers Alley	225	630	30.9	30.9	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Flex Alley (South)	959	610	36.3	36.3	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Pop-up Plaza	579	700	34.0	34.0	69.7	69.7	74.7	No	71.2	71.2	76.2	No
5th Street Pocket Park	320	775	30.6	30.6	69.7	69.7	74.7	No	71.2	71.2	76.2	No
5th Street Corridor	332	750	32.5	32.5	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Building 1 Roof Amenity	1239	200	57.6	57.6	69.7	70.0	74.7	No	71.2	71.4	76.2	No
Building 2 Roof Amenity	915	538	48.8	48.8	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Building 5 Rooftop Deck	886	597	37.9	37.9	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Building 6 Roof Amenity	493	505	49.2	49.2	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Building 7 Rooftop Deck	307	662	32.4	32.4	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Building 9 Level 5 Deck	720	727	35.3	35.3	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Building 9 Rooftop Deck	681	779	34.5	34.5	69.7	69.7	74.7	No	71.2	71.2	76.2	No
Building 10 Rooftop Deck	367	342	38.9	38.9	69.7	69.7	74.7	No	71.2	71.2	76.2	No

Fourth & Central
Open Space Noise Calculation

4th Street Plazas (South)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	200	34.8
Males (Adult)	85	43	3	58	74.3	200	37.9
Children	170	85	3	58	77.3	200	40.8
Total	**339**	**170**	-	-	**79.7**	-	**43.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Northern Landscaped Area (North)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	230	33.5
Males (Adult)	85	43	3	58	74.3	230	36.6
Children	170	85	3	58	77.3	230	39.6
Total	**339**	**170**	-	-	**79.7**	-	**42.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Plazas (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	678		
@ 200 feet	339	170	**43.3**
@ 230 feet	339	170	**42.0**
Total	**678**	**340**	**45.7**

Fourth & Central

Open Space Noise Calculation

Flex Alley North (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	250	29.1
Males (Adult)	37	19	3	58	70.8	250	32.4
Children	73	37	3	58	73.7	250	35.3
Total	**146**	**74**	-	-	**76.1**	-	**37.7**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	85.0	250	65.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	350	26.2
Males (Adult)	36	18	3	58	70.6	350	29.2
Children	73	37	3	58	73.7	350	32.3
Total	**145**	**73**	-	-	**76.1**	-	**34.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	37	19	3	55	67.8	450	24.3
Males (Adult)	37	19	3	58	70.8	450	27.3
Children	73	37	3	58	73.7	450	30.2
Total	**147**	**75**	-	-	**76.2**	-	**32.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	438		
@ 250 feet	146	74	37.7
@ 350 feet	145	73	34.7
@ 450 feet	147	75	32.6
Total	**438**	**222**	**40.3**

Fourth & Central

Open Space Noise Calculation

4th Street Green (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	490	22.5
Males (Adult)	31	16	3	58	70.0	490	25.8
Children	61	31	3	58	72.9	490	28.7
Total	**122**	**62**	-	-	**75.4**	-	**31.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	65.0	490	39.2

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	540	21.7
Males (Adult)	30	15	3	58	69.8	540	24.7
Children	61	31	3	58	72.9	540	27.8
Total	**121**	**61**	-	-	**75.3**	-	**30.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	121						
Females (Adult)	31	16	3	55	67.0	590	21.2
Males (Adult)	31	16	3	58	70.0	590	24.2
Children	61	31	3	58	72.9	590	27.0
Total	**123**	**63**	-	-	**75.4**	-	**29.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	365		
@ 490 feet	122	62	31.1
@ 540 feet	121	61	30.2
@ 590 feet	123	63	29.5
Total	**366**	**186**	**35.1**

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	435	26.1
Males (Adult)	54	27	3	58	72.3	435	29.1
Children	107	54	3	58	75.3	435	32.1
Total	**214**	**108**	-	-	**77.8**	-	**34.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	485	25.1
Males (Adult)	54	27	3	58	72.3	485	28.1
Children	107	54	3	58	75.3	485	31.2
Total	**214**	**108**	-	-	**77.8**	-	**33.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	585	23.5
Males (Adult)	54	27	3	58	72.3	585	26.5
Children	107	54	3	58	75.3	585	29.5
Total	**214**	**108**	-	-	**77.8**	-	**32.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	485	25.1
Males (Adult)	54	27	3	58	72.3	485	28.1
Children	107	54	3	58	75.3	485	31.2
Total	**214**	**108**	-	-	**77.8**	-	**33.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	685	22.1
Males (Adult)	54	27	3	58	72.3	685	25.1
Children	107	54	3	58	75.3	685	28.2
Total	**214**	**108**	-	-	**77.8**	-	**30.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	1062		
@ 435 feet	214	108	34.5
@ 485 feet	214	108	33.6
@ 585 feet	214	108	32.0
@ 485 feet	214	108	33.6
@ 685 feet	214	108	30.6
Total	**1070**	**540**	**40.0**

Fourth & Central
Open Space Noise Calculation

Residential Paseo (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	540	18.3
Males (Adult)	14	7	3	58	66.5	540	21.3
Children	27	14	3	58	69.5	540	24.4
Total	**54**	**28**	-	-	**71.9**	-	**26.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	625	17.1
Males (Adult)	14	7	3	58	66.5	625	20.1
Children	27	14	3	58	69.5	625	23.1
Total	**54**	**28**	-	-	**71.9**	-	**25.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	710	16.0
Males (Adult)	14	7	3	58	66.5	710	19.0
Children	27	14	3	58	69.5	710	22.0
Total	**54**	**28**	-	-	**71.9**	-	**24.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	162		
@ 540 feet	54	28	26.8
@ 625 feet	54	28	25.5
@ 710 feet	54	28	24.4
Total	**162**	**84**	**30.5**

Fourth & Central
Open Space Noise Calculation

The Mews (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	480	23.9
Males (Adult)	41	21	3	58	71.2	480	27.1
Children	81	41	3	58	74.1	480	30.0
Total	**162**	**82**	-	-	**76.6**	-	**32.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	580	22.3
Males (Adult)	41	21	3	58	71.2	580	25.5
Children	81	41	3	58	74.1	580	28.4
Total	**162**	**82**	-	-	**76.6**	-	**30.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	160						
Females (Adult)	40	20	3	55	68.0	680	20.9
Males (Adult)	40	20	3	58	71.0	680	23.9
Children	80	40	3	58	74.0	680	26.9
Total	**160**	**80**	-	-	**76.5**	-	**29.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	481		
@ 480 feet	162	82	32.5
@ 580 feet	162	82	**30.8**
@ 680 feet	160	80	29.3
Total Day	**484**	**244**	**35.9**

Fourth & Central
Open Space Noise Calculation

Fashion Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	540	23.3
Males (Adult)	43	22	3	58	71.4	540	26.3
Children	86	43	3	58	74.3	540	29.2
Total	**172**	**87**	-	-	**76.8**	-	**31.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	640	21.6
Males (Adult)	42	21	3	58	71.2	640	24.6
Children	86	43	3	58	74.3	640	27.8
Total	**170**	**85**	-	-	**76.7**	-	**30.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	740	20.4
Males (Adult)	42	21	3	58	71.2	740	23.4
Children	86	43	3	58	74.3	740	26.5
Total	**170**	**85**	-	-	**76.7**	-	**28.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	514		
@ 540 feet	172	87	31.7
@ 640 feet	170	85	**30.1**
@ 740 feet	170	85	28.9
Total Night	**512**	**257**	**35.2**

Fourth & Central
Open Space Noise Calculation

Makers Alley (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	630	18.1
Males (Adult)	19	10	3	58	68.0	630	21.6
Children	38	19	3	58	70.8	630	24.3
Total	**75**	**38**	-	-	**73.3**	-	**26.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	680	17.4
Males (Adult)	19	10	3	58	68.0	680	20.9
Children	38	19	3	58	70.8	680	23.7
Total	**75**	**38**	-	-	**73.3**	-	**26.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	730	16.8
Males (Adult)	18	9	3	58	67.5	730	19.8
Children	38	19	3	58	70.8	730	23.1
Total	**74**	**37**	-	-	**73.1**	-	**25.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Mesquit Paseo (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	225		
@ 630 feet	75	38	26.8
@ 680 feet	75	38	**26.1**
@ 730 feet	74	37	25.4
Total	**224**	**113**	**30.9**

Fourth & Central
Open Space Noise Calculation

Flex Alley South (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	610	27.9
Males (Adult)	160	80	3	58	77.0	610	30.9
Total	**320**	**160**	-	-	**78.8**	-	**32.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	710	26.5
Males (Adult)	160	80	3	58	77.0	710	29.5
Total	**320**	**160**	-	-	**78.8**	-	**31.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	810	25.4
Males (Adult)	160	80	3	58	77.0	810	28.4
Total	**320**	**160**	-	-	**78.8**	-	**30.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	959		
@ 610 feet	320	160	32.6
@ 710 feet	320	160	31.3
@ 810 feet	320	160	30.2
Total	**960**	**480**	**36.3**

Fourth & Central

Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	700	20.2
Males (Adult)	37	19	3	58	70.8	700	23.4
Children	73	37	3	58	73.7	700	26.3
Total	**146**	**74**	-	-	**76.1**	-	**28.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	750	19.6
Males (Adult)	37	19	3	58	70.8	750	22.8
Children	73	37	3	58	73.7	750	25.7
Total	**146**	**74**	-	-	**76.1**	-	**28.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	800	19.0
Males (Adult)	37	19	3	58	70.8	800	22.3
Children	73	37	3	58	73.7	800	25.2
Total	**146**	**74**	-	-	**76.1**	-	**27.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	144						
Females (Adult)	36	18	3	55	67.6	850	18.5
Males (Adult)	36	18	3	58	70.6	850	21.5
Children	72	36	3	58	73.6	850	24.5
Total	**144**	**72**	-	-	**76.0**	-	**26.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	579		
@ 700 feet	146	74	28.8
@ 750 feet	146	74	28.2
@ 800 feet	146	74	27.6
@ 850 feet	144	72	26.9
Total	**582**	**294**	**34.0**

Fourth & Central
Open Space Noise Calculation

5th Street Pocket Park (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	775	17.9
Males (Adult)	27	14	3	58	69.5	775	21.2
Children	54	27	3	58	72.3	775	24.1
Total	**107**	**54**	-	-	**74.8**	-	**26.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	850	17.1
Males (Adult)	27	14	3	58	69.5	850	20.4
Children	54	27	3	58	72.3	850	23.3
Total	**107**	**54**	-	-	**74.8**	-	**25.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	925	16.4
Males (Adult)	27	14	3	58	69.5	925	19.7
Children	54	27	3	58	72.3	925	22.5
Total	**107**	**54**	-	-	**74.8**	-	**25.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fitness Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	320		
@ 775 feet	107	54	26.5
@ 850 feet	107	54	25.7
@ 925 feet	107	54	25.0
Total	**321**	**162**	**30.6**

Fourth & Central
Open Space Noise Calculation

5th Street Corridor (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	750	20.5
Males (Adult)	43	22	3	58	71.4	750	23.5
Children	86	43	3	58	74.3	750	26.4
Total	**172**	**87**	-	-	**76.8**	-	**28.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	875	19.1
Males (Adult)	43	22	3	58	71.4	875	22.1
Children	86	43	3	58	74.3	875	25.0
Total	**172**	**87**	-	-	**76.8**	-	**27.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1000	18.0
Males (Adult)	43	22	3	58	71.4	1000	21.0
Children	86	43	3	58	74.3	1000	23.9
Total	**172**	**87**	-	-	**76.8**	-	**26.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Public Plaza Flex Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	514		
@ 750 feet	172	87	28.9
@ 875 feet	172	87	27.5
@ 1000 feet	172	87	26.4
Total	**516**	**261**	**32.5**

Fourth & Central
Open Space Noise Calculation

Building 1 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239						
Females (Adult)	309	155	3	55	76.9	200	40.4
Males (Adult)	310	155	3	58	79.9	200	43.4
Children	620	310	3	58	82.9	200	46.4
Total	**1239**	**620**	**-**	**-**	**85.3**	**-**	**48.9**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	200	56.9

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 1 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239		
@ 200 feet	1239	620	48.9
Amplified Speakers @ 365 feet	-	-	56.9
Total	**1239**	**620**	**57.6**

Fourth & Central
Open Space Noise Calculation

Building 2 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	915						
Females (Adult)	228	114	3	55	75.6	538	30.5
Males (Adult)	229	115	3	58	78.6	538	33.5
Children	458	229	3	58	81.6	538	36.5
Total	**915**	**458**	**-**	**-**	**84.0**	**-**	**39.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	538	48.3

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 2 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	915		
@ 538 feet	915	458	39.0
Amplified Speakers @ 365 feet	-	-	48.3
Total	**915**	**458**	**48.8**

Fourth & Central
Open Space Noise Calculation

Building 5 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	886						
Females (Adult)	221	111	3	55	75.5	597	29.5
Males (Adult)	222	111	3	58	78.5	597	32.5
Children	443	222	3	58	81.5	597	35.5
Total	**886**	**444**	**-**	**-**	**83.9**	**-**	**37.9**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	597	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 5 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	886		
@ 597 feet	886	444	37.9
Amplified Speakers @ 365 feet	-	-	0.0
Total	**886**	**444**	**37.9**

Fourth & Central
Open Space Noise Calculation

Building 6 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	493						
Females (Adult)	123	62	3	55	72.9	505	28.4
Males (Adult)	124	62	3	58	75.9	505	31.4
Children	247	124	3	58	78.9	505	34.4
Total	**494**	**248**	**-**	**-**	**81.4**	**-**	**36.8**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	505	48.9

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 6 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	493		
@ 505 feet	494	248	36.8
Amplified Speakers @ 365 feet	-	-	48.9
Total	**494**	**248**	**49.2**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	307						
Females (Adult)	76	38	3	55	70.8	662	23.9
Males (Adult)	77	39	3	58	73.9	662	27.0
Children	154	77	3	58	76.9	662	30.0
Total	**307**	**154**	**-**	**-**	**79.3**	**-**	**32.4**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	662	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	307		
@ 662 feet	307	154	32.4
Amplified Speakers @ 365 feet	-	-	0.0
Total	**307**	**154**	**32.4**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	720						
Females (Adult)	180	90	3	55	74.5	727	26.9
Males (Adult)	180	90	3	58	77.5	727	29.9
Children	360	180	3	58	80.6	727	32.9
Total	**720**	**360**	**-**	**-**	**83.0**	**-**	**35.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	727	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	720		
@ 727 feet	720	360	35.3
Amplified Speakers @ 365 feet	-	-	0.0
Total	**720**	**360**	**35.3**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	681						
Females (Adult)	170	85	3	55	74.3	779	26.0
Males (Adult)	171	86	3	58	77.3	779	29.1
Children	341	171	3	58	80.3	779	32.0
Total	**682**	**342**	**-**	**-**	**82.8**	**-**	**34.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	779	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	681		
@ 779 feet	682	342	34.5
Amplified Speakers @ 365 feet	-	-	0.0
Total	**682**	**342**	**34.5**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	367						
Females (Adult)	91	46	3	55	71.6	342	30.5
Males (Adult)	92	46	3	58	74.6	342	33.5
Children	184	92	3	58	77.6	342	36.5
Total	**367**	**184**	**-**	**-**	**80.1**	**-**	**38.9**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	342	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	367		
@ 342 feet	367	184	38.9
Amplified Speakers @ 365 feet	-	-	0.0
Total	**367**	**184**	**38.9**

Fourth & Central

Open Space Noise Calculation

Summary - R6

Outdoor Space	Capacity	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
4th Street Plazas	678	545	37.3	37.3	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Flex Alley (North)	438	625	33.4	33.4	66.7	66.7	71.7	No	62.7	62.7	67.7	No
4th Street Green	365	860	30.5	30.5	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Central Courtyard	1062	800	35.3	35.3	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Residential Paseo	162	915	26.3	26.3	66.7	66.7	71.7	No	62.7	62.7	67.7	No
The Mews	481	780	32.1	32.1	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Fashion Plaza	514	915	31.0	31.0	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Makers Alley	225	1025	26.9	26.9	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Flex Alley (South)	959	925	33.0	33.0	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Pop-up Plaza	579	960	31.4	31.4	66.7	66.7	71.7	No	62.7	62.7	67.7	No
5th Street Pocket Park	320	1135	27.5	27.5	66.7	66.7	71.7	No	62.7	62.7	67.7	No
5th Street Corridor	332	1050	29.8	29.8	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Building 1 Roof Amenity	1239	516	49.3	49.3	66.7	66.8	71.7	No	62.7	62.9	67.7	No
Building 2 Roof Amenity	915	705	46.5	46.5	66.7	66.7	71.7	No	62.7	62.8	67.7	No
Building 5 Rooftop Deck	886	928	34.1	34.1	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Building 6 Roof Amenity	493	836	44.8	44.8	66.7	66.7	71.7	No	62.7	62.8	67.7	No
Building 7 Rooftop Deck	307	1008	28.8	28.8	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Building 9 Level 5 Deck	720	1032	32.3	32.3	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Building 9 Rooftop Deck	681	1069	31.7	31.7	66.7	66.7	71.7	No	62.7	62.7	67.7	No
Building 10 Rooftop Deck	367	603	34.0	34.0	66.7	66.7	71.7	No	62.7	62.7	67.7	No

Fourth & Central
Open Space Noise Calculation

4th Street Plazas (South)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	545	26.0
Males (Adult)	85	43	3	58	74.3	545	29.1
Children	170	85	3	58	77.3	545	32.1
Total	**339**	**170**	-	-	**79.7**	-	**34.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Northern Landscaped Area (North)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	339						
Females (Adult)	84	42	3	55	71.2	575	25.6
Males (Adult)	85	43	3	58	74.3	575	28.7
Children	170	85	3	58	77.3	575	31.6
Total	**339**	**170**	-	-	**79.7**	-	**34.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Plazas (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	678		
@ 545 feet	339	170	**34.5**
@ 575 feet	339	170	**34.1**
Total	**678**	**340**	**37.3**

Fourth & Central

Open Space Noise Calculation

Flex Alley North (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	625	21.2
Males (Adult)	37	19	3	58	70.8	625	24.4
Children	73	37	3	58	73.7	625	27.3
Total	**146**	**74**	-	-	**76.1**	-	**29.8**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	85.0	625	57.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	36	18	3	55	67.6	725	19.9
Males (Adult)	36	18	3	58	70.6	725	22.9
Children	73	37	3	58	73.7	725	26.0
Total	**145**	**73**	-	-	**76.1**	-	**28.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley North (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	146						
Females (Adult)	37	19	3	55	67.8	825	19.0
Males (Adult)	37	19	3	58	70.8	825	22.0
Children	73	37	3	58	73.7	825	24.9
Total	**147**	**75**	-	-	**76.2**	-	**27.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	438		
@ 625 feet	146	74	29.8
@ 725 feet	145	73	28.4
@ 825 feet	147	75	27.4
Total	**438**	**222**	**33.4**

Fourth & Central

Open Space Noise Calculation

4th Street Green (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	860	17.6
Males (Adult)	31	16	3	58	70.0	860	20.9
Children	61	31	3	58	72.9	860	23.8
Total	**122**	**62**	-	-	**75.4**	-	**26.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	85	65.0	860	34.3

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	122						
Females (Adult)	30	15	3	55	66.8	910	17.1
Males (Adult)	30	15	3	58	69.8	910	20.1
Children	61	31	3	58	72.9	910	23.3
Total	**121**	**61**	-	-	**75.3**	-	**25.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

4th Street Green (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	121						
Females (Adult)	31	16	3	55	67.0	960	16.9
Males (Adult)	31	16	3	58	70.0	960	19.9
Children	61	31	3	58	72.9	960	22.8
Total	**123**	**63**	-	-	**75.4**	-	**25.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

River Balcony North (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	365		
@ 860 feet	122	62	26.2
@ 910 feet	121	61	25.6
@ 960 feet	123	63	25.3
Total	**366**	**186**	**30.5**

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	800	20.8
Males (Adult)	54	27	3	58	72.3	800	23.8
Children	107	54	3	58	75.3	800	26.8
Total	**214**	**108**	-	-	**77.8**	-	**29.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	850	20.3
Males (Adult)	54	27	3	58	72.3	850	23.3
Children	107	54	3	58	75.3	850	26.3
Total	**214**	**108**	-	-	**77.8**	-	**28.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	950	19.3
Males (Adult)	54	27	3	58	72.3	950	22.3
Children	107	54	3	58	75.3	950	25.3
Total	**214**	**108**	-	-	**77.8**	-	**27.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	850	20.3
Males (Adult)	54	27	3	58	72.3	850	23.3
Children	107	54	3	58	75.3	850	26.3
Total	**214**	**108**	-	-	**77.8**	-	**28.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	213						
Females (Adult)	53	27	3	55	69.3	1050	18.4
Males (Adult)	54	27	3	58	72.3	1050	21.4
Children	107	54	3	58	75.3	1050	24.4
Total	**214**	**108**	-	-	**77.8**	-	**26.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	1062		
@ 800 feet	214	108	29.2
@ 850 feet	214	108	28.7
@ 950 feet	214	108	27.7
@ 850 feet	214	108	28.7
@ 1050 feet	214	108	26.9
Total	**1070**	**540**	**35.3**

Fourth & Central
Open Space Noise Calculation

Residential Paseo (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	915	13.8
Males (Adult)	14	7	3	58	66.5	915	16.8
Children	27	14	3	58	69.5	915	19.8
Total	**54**	**28**	-	-	**71.9**	-	**22.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	1000	13.0
Males (Adult)	14	7	3	58	66.5	1000	16.0
Children	27	14	3	58	69.5	1000	19.0
Total	**54**	**28**	-	-	**71.9**	-	**21.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	54						
Females (Adult)	13	7	3	55	63.5	1085	12.3
Males (Adult)	14	7	3	58	66.5	1085	15.3
Children	27	14	3	58	69.5	1085	18.3
Total	**54**	**28**	-	-	**71.9**	-	**20.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Residential Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	162		
@ 915 feet	54	28	22.2
@ 1000 feet	54	28	21.4
@ 1085 feet	54	28	20.7
Total	**162**	**84**	**26.3**

Fourth & Central
Open Space Noise Calculation

The Mews (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	780	19.7
Males (Adult)	41	21	3	58	71.2	780	22.9
Children	81	41	3	58	74.1	780	25.8
Total	**162**	**82**	-	-	**76.6**	-	**28.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	161						
Females (Adult)	40	20	3	55	68.0	880	18.7
Males (Adult)	41	21	3	58	71.2	880	21.9
Children	81	41	3	58	74.1	880	24.8
Total	**162**	**82**	-	-	**76.6**	-	**27.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	160						
Females (Adult)	40	20	3	55	68.0	980	17.7
Males (Adult)	40	20	3	58	71.0	980	20.7
Children	80	40	3	58	74.0	980	23.7
Total	**160**	**80**	-	-	**76.5**	-	**26.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

The Mews (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	481		
@ 780 feet	162	82	28.3
@ 880 feet	162	82	**27.2**
@ 980 feet	160	80	26.2
Total Day	**484**	**244**	**32.1**

Fourth & Central

Open Space Noise Calculation

Fashion Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	915	18.7
Males (Adult)	43	22	3	58	71.4	915	21.7
Children	86	43	3	58	74.3	915	24.6
Total	**172**	**87**	-	-	**76.8**	-	**27.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	1015	17.6
Males (Adult)	42	21	3	58	71.2	1015	20.6
Children	86	43	3	58	74.3	1015	23.7
Total	**170**	**85**	-	-	**76.7**	-	**26.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	171						
Females (Adult)	42	21	3	55	68.2	1115	16.8
Males (Adult)	42	21	3	58	71.2	1115	19.8
Children	86	43	3	58	74.3	1115	22.9
Total	**170**	**85**	-	-	**76.7**	-	**25.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fashion Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	514		
@ 915 feet	172	87	27.1
@ 1015 feet	170	85	**26.1**
@ 1115 feet	170	85	25.3
Total Night	**512**	**257**	**31.0**

Fourth & Central
Open Space Noise Calculation

Makers Alley (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1025	13.9
Males (Adult)	19	10	3	58	68.0	1025	17.3
Children	38	19	3	58	70.8	1025	20.1
Total	**75**	**38**	-	-	**73.3**	-	**22.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1075	13.5
Males (Adult)	19	10	3	58	68.0	1075	16.9
Children	38	19	3	58	70.8	1075	19.7
Total	**75**	**38**	-	-	**73.3**	-	**22.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Makers Alley (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	75						
Females (Adult)	18	9	3	55	64.5	1125	13.1
Males (Adult)	18	9	3	58	67.5	1125	16.1
Children	38	19	3	58	70.8	1125	19.3
Total	**74**	**37**	-	-	**73.1**	-	**21.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Mesquit Paseo (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	225		
@ 1025 feet	75	38	22.6
@ 1075 feet	75	38	**22.2**
@ 1125 feet	74	37	21.6
Total	**224**	**113**	**26.9**

Fourth & Central
Open Space Noise Calculation

Flex Alley South (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	925	24.3
Males (Adult)	160	80	3	58	77.0	925	27.3
Total	**320**	**160**	-	-	**78.8**	-	**29.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	1025	23.4
Males (Adult)	160	80	3	58	77.0	1025	26.4
Total	**320**	**160**	-	-	**78.8**	-	**28.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	320						
Females (Adult)	160	80	3	55	74.0	1125	22.6
Males (Adult)	160	80	3	58	77.0	1125	25.6
Total	**320**	**160**	-	-	**78.8**	-	**27.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Flex Alley South (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	959		
@ 925 feet	320	160	29.0
@ 1025 feet	320	160	28.1
@ 1125 feet	320	160	27.3
Total	**960**	**480**	**33.0**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	960	17.4
Males (Adult)	37	19	3	58	70.8	960	20.7
Children	73	37	3	58	73.7	960	23.6
Total	**146**	**74**	-	-	**76.1**	-	**26.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	1010	17.0
Males (Adult)	37	19	3	58	70.8	1010	20.2
Children	73	37	3	58	73.7	1010	23.1
Total	**146**	**74**	-	-	**76.1**	-	**25.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	36	18	3	55	67.6	1060	16.6
Males (Adult)	37	19	3	58	70.8	1060	19.8
Children	73	37	3	58	73.7	1060	22.7
Total	**146**	**74**	-	-	**76.1**	-	**25.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	36	18	3	55	67.6	1110	16.2
Males (Adult)	36	18	3	58	70.6	1110	19.2
Children	72	36	3	58	73.6	1110	22.2
Total	**144**	**72**	-	-	**76.0**	-	**24.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 960 feet	146	74	26.0
@ 1010 feet	146	74	25.6
@ 1060 feet	146	74	25.2
@ 1110 feet	144	72	24.6
Total	**582**	**294**	**31.4**

Fourth & Central
Open Space Noise Calculation

5th Street Pocket Park (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	1135	14.6
Males (Adult)	27	14	3	58	69.5	1135	17.9
Children	54	27	3	58	72.3	1135	20.8
Total	**107**	**54**	-	-	**74.8**	-	**23.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	1210	14.0
Males (Adult)	27	14	3	58	69.5	1210	17.3
Children	54	27	3	58	72.3	1210	20.2
Total	**107**	**54**	-	-	**74.8**	-	**22.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Pocket Park (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	107						
Females (Adult)	26	13	3	55	66.1	1285	13.5
Males (Adult)	27	14	3	58	69.5	1285	16.8
Children	54	27	3	58	72.3	1285	19.7
Total	**107**	**54**	-	-	**74.8**	-	**22.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Fitness Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	320		
@ 1135 feet	107	54	23.2
@ 1210 feet	107	54	22.7
@ 1285 feet	107	54	22.1
Total	**321**	**162**	**27.5**

Fourth & Central
Open Space Noise Calculation

5th Street Corridor (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1050	17.5
Males (Adult)	43	22	3	58	71.4	1050	20.5
Children	86	43	3	58	74.3	1050	23.5
Total	**172**	**87**	-	-	**76.8**	-	**25.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Center)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1175	16.6
Males (Adult)	43	22	3	58	71.4	1175	19.6
Children	86	43	3	58	74.3	1175	22.5
Total	**172**	**87**	-	-	**76.8**	-	**25.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

5th Street Corridor (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	172						
Females (Adult)	43	22	3	55	68.4	1300	15.7
Males (Adult)	43	22	3	58	71.4	1300	18.7
Children	86	43	3	58	74.3	1300	21.6
Total	**172**	**87**	-	-	**76.8**	-	**24.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Public Plaza Flex Deck (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	514		
@ 1050 feet	172	87	25.9
@ 1175 feet	172	87	25.0
@ 1300 feet	172	87	24.1
Total	**516**	**261**	**29.8**

Fourth & Central
Open Space Noise Calculation

Building 1 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239						
Females (Adult)	309	155	3	55	76.9	516	32.2
Males (Adult)	310	155	3	58	79.9	516	35.2
Children	620	310	3	58	82.9	516	38.2
Total	**1239**	**620**	**-**	**-**	**85.3**	**-**	**40.6**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	516	48.7

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 1 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1239		
@ 516 feet	1239	620	40.6
Amplified Speakers @ 365 feet	-	-	48.7
Total	**1239**	**620**	**49.3**

Fourth & Central
Open Space Noise Calculation

Building 2 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	915						
Females (Adult)	228	114	3	55	75.6	705	28.1
Males (Adult)	229	115	3	58	78.6	705	31.2
Children	458	229	3	58	81.6	705	34.2
Total	**915**	**458**	**-**	**-**	**84.0**	**-**	**36.6**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	705	46.0

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 2 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	915		
@ 705 feet	915	458	36.6
Amplified Speakers @ 365 feet	-	-	46.0
Total	**915**	**458**	**46.5**

Fourth & Central
Open Space Noise Calculation

Building 5 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	886						
Females (Adult)	221	111	3	55	75.5	928	25.6
Males (Adult)	222	111	3	58	78.5	928	28.6
Children	443	222	3	58	81.5	928	31.7
Total	**886**	**444**	**-**	**-**	**83.9**	**-**	**34.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	928	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 5 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	886		
@ 928 feet	886	444	34.1
Amplified Speakers @ 365 feet	-	-	0.0
Total	**886**	**444**	**34.1**

Fourth & Central
Open Space Noise Calculation

Building 6 Roof Amenity							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	493						
Females (Adult)	123	62	3	55	72.9	836	24.0
Males (Adult)	124	62	3	58	75.9	836	27.0
Children	247	124	3	58	78.9	836	30.0
Total	**494**	**248**	**-**	**-**	**81.4**	**-**	**32.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	836	44.5

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 6 Roof Amenity			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity @ 836 feet	493 494	248	32.5
Amplified Speakers @ 365 feet	-	-	44.5
Total	**494**	**248**	**44.8**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	307						
Females (Adult)	76	38	3	55	70.8	1008	20.3
Males (Adult)	77	39	3	58	73.9	1008	23.4
Children	154	77	3	58	76.9	1008	26.3
Total	**307**	**154**	**-**	**-**	**79.3**	**-**	**28.8**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1008	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	307		
@ 1008 feet	307	154	28.8
Amplified Speakers @ 365 feet	-	-	0.0
Total	**307**	**154**	**28.8**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	720						
Females (Adult)	180	90	3	55	74.5	1032	23.8
Males (Adult)	180	90	3	58	77.5	1032	26.8
Children	360	180	3	58	80.6	1032	29.8
Total	**720**	**360**	**-**	**-**	**83.0**	**-**	**32.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1032	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	720		
@ 1032 feet	720	360	32.3
Amplified Speakers @ 365 feet	-	-	0.0
Total	**720**	**360**	**32.3**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	681						
Females (Adult)	170	85	3	55	74.3	1069	23.3
Males (Adult)	171	86	3	58	77.3	1069	26.3
Children	341	171	3	58	80.3	1069	29.3
Total	**682**	**342**	**-**	**-**	**82.8**	**-**	**31.7**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	1069	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	681		
@ 1069 feet	682	342	31.7
Amplified Speakers @ 365 feet	-	-	0.0
Total	**682**	**342**	**31.7**

Fourth & Central
Open Space Noise Calculation

Building 7 Rooftop Deck							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	367						
Females (Adult)	91	46	3	55	71.6	603	25.6
Males (Adult)	92	46	3	58	74.6	603	28.6
Children	184	92	3	58	77.6	603	31.6
Total	**367**	**184**	**-**	**-**	**80.1**	**-**	**34.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	75	75.0	603	

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Building 7 Rooftop Deck			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	367		
@ 603 feet	367	184	34.0
Amplified Speakers @ 365 feet	-	-	0.0
Total	**367**	**184**	**34.0**

Fourth & Central

Open Space Noise Calculation

Summary

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R1	825	61.1	61.1	67.7	68.6	72.7	No	60.6	63.9	65.6	No
Pop-up Plaza	R1	1150	58.0	58.0	67.7	68.1	72.7	No	60.6	62.5	65.6	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	825	39.5
Males (Adult)	107	54	3	75	92.3	825	43.5
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**45.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	825	60.6

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	875	39.0
Males (Adult)	107	54	3	75	92.3	875	43.0
Children	107	54	3	58	75.3	875	26.0
Total	**321**	**162**	**-**	**-**	**93.8**	**-**	**44.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	975	38.1
Males (Adult)	107	54	3	75	92.3	975	42.1
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**43.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	875	39.0
Males (Adult)	107	54	3	75	92.3	875	43.0
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**44.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	1075	37.2
Males (Adult)	107	54	3	75	92.3	1075	41.2
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**42.7**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 825 feet	321	108	45.0
@ 875 feet	321	108	44.5
@ 975 feet	214	108	43.5
@ 875 feet	214	108	44.5
@ 1075 feet	214	108	42.7
Amplified Speakers	-	-	60.6
Total	**1284**	**540**	**61.1**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1150	34.9
Males (Adult)	72	36	3	75	90.6	1150	38.9
Children							
Total	**144**	**72**	-	-	**92.0**	-	**40.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	1150	57.7

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1200	34.5
Males (Adult)	72	36	3	75	90.6	1200	38.5
Children							
Total	**144**	**72**	-	-	**92.0**	-	**40.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1250	34.2
Males (Adult)	72	36	3	75	90.6	1250	38.2
Children							
Total	**144**	**72**	-	-	**92.0**	-	**39.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	1300	33.8
Males (Adult)	72	36	3	75	90.6	1300	37.8
Children							
Total	**144**	**72**	-	-	**92.0**	-	**39.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 1150 feet	144	72	40.3
@ 1200 feet	144	72	40.0
@ 1250 feet	144	72	39.6
@ 1300 feet	144	72	39.3
Amplified Speakers @ 365 feet	-	-	57.7
Total	**576**	**288**	**58.0**

Fourth & Central

Open Space Noise Calculation

Summary - Mitigated

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R1	825	60.2	60.2	67.7	68.4	72.7	No	60.6	63.4	65.6	No
Pop-up Plaza	R1	1150	57.1	57.1	67.7	68.1	72.7	No	60.6	62.2	65.6	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	825	39.5
Males (Adult)	107	54	3	75	92.3	825	43.5
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**45.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	825	59.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	875	39.0
Males (Adult)	107	54	3	75	92.3	875	43.0
Children	107	54	3	58	75.3	875	26.0
Total	**321**	**162**	**-**	**-**	**93.8**	**-**	**44.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	975	38.1
Males (Adult)	107	54	3	75	92.3	975	42.1
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**43.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	875	39.0
Males (Adult)	107	54	3	75	92.3	875	43.0
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**44.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	107	54	3	71	88.3	1075	37.2
Males (Adult)	107	54	3	75	92.3	1075	41.2
Children							
Total	**214**	**108**	**-**	**-**	**93.8**	**-**	**42.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 825 feet	321	108	45.0
@ 875 feet	321	108	44.5
@ 975 feet	214	108	43.5
@ 875 feet	214	108	44.5
@ 1075 feet	214	108	42.7
Amplified Speakers	-	-	59.6
Total	**1284**	**540**	**60.2**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1150	34.9
Males (Adult)	72	36	3	75	90.6	1150	38.9
Children							
Total	**144**	**72**	-	-	**92.0**	-	**40.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	1150	56.7

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1200	34.5
Males (Adult)	72	36	3	75	90.6	1200	38.5
Children							
Total	**144**	**72**	-	-	**92.0**	-	**40.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1250	34.2
Males (Adult)	72	36	3	75	90.6	1250	38.2
Children							
Total	**144**	**72**	-	-	**92.0**	-	**39.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	1300	33.8
Males (Adult)	72	36	3	75	90.6	1300	37.8
Children							
Total	**144**	**72**	-	-	**92.0**	-	**39.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	579		
@ 1150 feet	144	72	40.3
@ 1200 feet	144	72	40.0
@ 1250 feet	144	72	39.6
@ 1300 feet	144	72	39.3
Amplified Speakers @ 365 feet	-	-	56.7
Total	**576**	**288**	**57.1**

Fourth & Central

Open Space Noise Calculation

Summary

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R2	370	68.0	68.0	70.5	72.4	75.5	No	64.8	69.7	69.8	No
Pop-up Plaza	R2	600	63.6	63.6	70.5	71.3	75.5	No	64.8	67.3	69.8	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	370	46.4
Males (Adult)	107	54	3	75	92.3	370	50.5
Children							
Total	**213**	**107**	**-**	**-**	**93.8**	**-**	**51.9**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	370	67.6

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	420	45.3
Males (Adult)	107	54	3	75	92.3	420	49.4
Children							
Total	**213**	**107**	**-**	**-**	**93.8**	**-**	**50.8**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	520	43.5
Males (Adult)	107	54	3	75	92.3	520	47.5
Children							
Total	**213**	**107**	**-**	**-**	**93.8**	**-**	**49.0**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	420	45.3
Males (Adult)	107	54	3	75	92.3	420	49.4
Children							
Total	**213**	**107**	**-**	**-**	**93.8**	**-**	**50.8**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	53	27	3	71	85.3	620	39.0
Males (Adult)	54	27	3	75	89.3	620	43.0
Children							
Total	**107**	**54**	**-**	**-**	**90.8**	**-**	**44.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 370 feet	213	107	51.9
@ 420 feet	213	107	50.8
@ 520 feet	213	107	49.0
@ 420 feet	213	107	50.8
@ 620 feet	107	54	44.5
Amplified Speakers			67.6
Total	**959**	**482**	**68.0**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	600	40.5
Males (Adult)	73	37	3	75	90.7	600	44.7
Children							
Total	**145**	**73**	-	-	**92.1**	-	**46.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	600	63.4

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	650	39.8
Males (Adult)	73	37	3	75	90.7	650	44.0
Children							
Total	**145**	**73**	-	-	**92.1**	-	**45.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	700	39.2
Males (Adult)	73	37	3	75	90.7	700	43.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**44.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	750	38.6
Males (Adult)	72	36	3	75	90.6	750	42.6
Children							
Total	36	18	3	75	**92.0**	-	**44.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 600 feet	145	73	46.1
@ 650 feet	145	73	45.4
@ 700 feet	145	73	44.7
@ 750 feet	36	18	44.1
Amplified Speakers @ 365 feet	-	-	63.4
Total	**471**	**237**	**63.6**

Fourth & Central

Open Space Noise Calculation

Summary - Mitigated

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R2	370	67.1	67.1	70.5	72.1	75.5	No	64.8	69.1	69.8	No
Pop-up Plaza	R2	600	62.7	62.7	70.5	71.2	75.5	No	64.8	66.9	69.8	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	370	46.4
Males (Adult)	107	54	3	75	92.3	370	50.5
Children							
Total	**213**	**107**	-	-	**93.8**	-	**51.9**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	370	66.6

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	420	45.3
Males (Adult)	107	54	3	75	92.3	420	49.4
Children							
Total	**213**	**107**	-	-	**93.8**	-	**50.8**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	520	43.5
Males (Adult)	107	54	3	75	92.3	520	47.5
Children							
Total	**213**	**107**	-	-	**93.8**	-	**49.0**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	420	45.3
Males (Adult)	107	54	3	75	92.3	420	49.4
Children							
Total	**213**	**107**	-	-	**93.8**	-	**50.8**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	53	27	3	71	85.3	620	39.0
Males (Adult)	54	27	3	75	89.3	620	43.0
Children							
Total	**107**	**54**	-	-	**90.8**	-	**44.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 370 feet	213	107	51.9
@ 420 feet	213	107	50.8
@ 520 feet	213	107	49.0
@ 420 feet	213	107	50.8
@ 620 feet	107	54	44.5
Amplified Speakers			66.6
Total	**959**	**482**	**67.1**

Fourth & Central

Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	600	40.5
Males (Adult)	73	37	3	75	90.7	600	44.7
Children							
Total	**145**	**73**	-	-	**92.1**	-	**46.1**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	600	62.4

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	650	39.8
Males (Adult)	73	37	3	75	90.7	650	44.0
Children							
Total	**145**	**73**	-	-	**92.1**	-	**45.4**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	700	39.2
Males (Adult)	73	37	3	75	90.7	700	43.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**44.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	750	38.6
Males (Adult)	72	36	3	75	90.6	750	42.6
Children							
Total	36	18	3	75	**92.0**	-	**44.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	579		
@ 600 feet	145	73	46.1
@ 650 feet	145	73	45.4
@ 700 feet	145	73	44.7
@ 750 feet	36	18	44.1
Amplified Speakers @ 365 feet	-	-	62.4
Total	**471**	**237**	**62.7**

Fourth & Central

Open Space Noise Calculation

Summary

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R3	1080	58.8	58.8	58.5	61.6	63.5	No	61.8	63.6	66.8	No
Pop-up Plaza	R3	830	60.8	60.8	58.5	62.8	63.5	No	61.8	64.4	66.8	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1080	37.1
Males (Adult)	107	54	3	75	92.3	1080	41.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.6**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	1080	58.3

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1130	36.7
Males (Adult)	107	54	3	75	92.3	1130	40.8
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1230	36.0
Males (Adult)	107	54	3	75	92.3	1230	40.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**41.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1130	36.7
Males (Adult)	107	54	3	75	92.3	1130	40.8
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1330	35.3
Males (Adult)	107	54	3	75	92.3	1330	39.4
Children							
Total	**213**	**107**	-	-	**93.8**	-	**40.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 1080 feet	213	107	42.6
@ 1130 feet	213	107	42.2
@ 1230 feet	213	107	41.5
@ 1130 feet	213	107	42.2
@ 1330 feet	213	107	40.8
Amplified Speakers			58.3
Total	**1065**	**535**	**58.8**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	830	37.7
Males (Adult)	73	37	3	75	90.7	830	41.8
Children							
Total	**145**	**73**	-	-	**92.1**	-	**43.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	830	60.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	880	37.2
Males (Adult)	73	37	3	75	90.7	880	41.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	930	36.7
Males (Adult)	73	37	3	75	90.7	930	40.9
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	980	36.3
Males (Adult)	72	36	3	75	90.6	980	40.3
Children							
Total	**144**	**72**	-	-	**92.0**	-	**41.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 830 feet	145	73	43.3
@ 880 feet	145	73	42.8
@ 930 feet	145	73	42.3
@ 980 feet	144	72	41.7
Amplified Speakers @ 365 feet	-	-	60.6
Total	**579**	**291**	**60.8**

Fourth & Central

Open Space Noise Calculation

Summary - Mitigated

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R3	1080	57.9	57.9	58.5	61.2	63.5	No	61.8	63.3	66.8	No
Pop-up Plaza	R3	830	59.9	59.9	58.5	62.3	63.5	No	61.8	64.0	66.8	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1080	37.1
Males (Adult)	107	54	3	75	92.3	1080	41.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.6**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	1080	57.3

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1130	36.7
Males (Adult)	107	54	3	75	92.3	1130	40.8
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1230	36.0
Males (Adult)	107	54	3	75	92.3	1230	40.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**41.5**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1130	36.7
Males (Adult)	107	54	3	75	92.3	1130	40.8
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.2**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1330	35.3
Males (Adult)	107	54	3	75	92.3	1330	39.4
Children							
Total	**213**	**107**	-	-	**93.8**	-	**40.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 1080 feet	213	107	42.6
@ 1130 feet	213	107	42.2
@ 1230 feet	213	107	41.5
@ 1130 feet	213	107	42.2
@ 1330 feet	213	107	40.8
Amplified Speakers			57.3
Total	**1065**	**535**	**57.9**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	830	37.7
Males (Adult)	73	37	3	75	90.7	830	41.8
Children							
Total	**145**	**73**	-	-	**92.1**	-	**43.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	830	59.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	880	37.2
Males (Adult)	73	37	3	75	90.7	880	41.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	930	36.7
Males (Adult)	73	37	3	75	90.7	930	40.9
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	980	36.3
Males (Adult)	72	36	3	75	90.6	980	40.3
Children							
Total	**144**	**72**	-	-	**92.0**	-	**41.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 830 feet	145	73	43.3
@ 880 feet	145	73	42.8
@ 930 feet	145	73	42.3
@ 980 feet	144	72	41.7
Amplified Speakers @ 365 feet	-	-	59.6
Total	**579**	**291**	**59.9**

Fourth & Central

Open Space Noise Calculation

Summary

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R4	640	63.3	63.3	70.2	71.0	75.2	No	66.7	68.3	71.7	No
Pop-up Plaza	R4	830	60.8	60.8	70.2	70.7	75.2	No	66.7	67.7	71.7	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	640	41.7
Males (Adult)	107	54	3	75	92.3	640	45.7
Children							
Total	**213**	**107**	-	-	**93.8**	-	**47.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	640	62.8

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	690	41.0
Males (Adult)	107	54	3	75	92.3	690	45.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**46.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	790	39.8
Males (Adult)	107	54	3	75	92.3	790	43.9
Children							
Total	**213**	**107**	-	-	**93.8**	-	**45.3**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	690	41.0
Males (Adult)	107	54	3	75	92.3	690	45.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**46.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	890	38.8
Males (Adult)	107	54	3	75	92.3	890	42.9
Children							
Total	**213**	**107**	-	-	**93.8**	-	**44.3**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 640 feet	213	107	47.2
@ 690 feet	213	107	46.5
@ 790 feet	213	107	45.3
@ 690 feet	213	107	46.5
@ 890 feet	213	107	44.3
Amplified Speakers			62.8
Total	**1065**	**535**	**63.3**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	830	37.7
Males (Adult)	73	37	3	75	90.7	830	41.8
Children							
Total	**145**	**73**	-	-	**92.1**	-	**43.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	830	60.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	880	37.2
Males (Adult)	73	37	3	75	90.7	880	41.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	930	36.7
Males (Adult)	73	37	3	75	90.7	930	40.9
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	980	36.3
Males (Adult)	72	36	3	75	90.6	980	40.3
Children							
Total	**144**	**72**	-	-	**92.0**	-	**41.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 830 feet	145	73	43.3
@ 880 feet	145	73	42.8
@ 930 feet	145	73	42.3
@ 980 feet	144	72	41.7
Amplified Speakers @ 365 feet	-	-	60.6
Total	**579**	**291**	**60.8**

Fourth & Central

Open Space Noise Calculation

Summary - Mitigated

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R4	640	62.4	62.4	70.2	70.9	75.2	No	66.7	68.1	71.7	No
Pop-up Plaza	R4	830	59.9	59.9	70.2	70.6	75.2	No	66.7	67.5	71.7	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	640	41.7
Males (Adult)	107	54	3	75	92.3	640	45.7
Children							
Total	**213**	**107**	-	-	**93.8**	-	**47.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	640	61.8

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	690	41.0
Males (Adult)	107	54	3	75	92.3	690	45.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**46.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	790	39.8
Males (Adult)	107	54	3	75	92.3	790	43.9
Children							
Total	**213**	**107**	-	-	**93.8**	-	**45.3**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	690	41.0
Males (Adult)	107	54	3	75	92.3	690	45.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**46.5**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	890	38.8
Males (Adult)	107	54	3	75	92.3	890	42.9
Children							
Total	**213**	**107**	-	-	**93.8**	-	**44.3**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 640 feet	213	107	47.2
@ 690 feet	213	107	46.5
@ 790 feet	213	107	45.3
@ 690 feet	213	107	46.5
@ 890 feet	213	107	44.3
Amplified Speakers			61.8
Total	**1065**	**535**	**62.4**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	830	37.7
Males (Adult)	73	37	3	75	90.7	830	41.8
Children							
Total	**145**	**73**	-	-	**92.1**	-	**43.3**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	830	59.6

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	880	37.2
Males (Adult)	73	37	3	75	90.7	880	41.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.8**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	930	36.7
Males (Adult)	73	37	3	75	90.7	930	40.9
Children							
Total	**145**	**73**	-	-	**92.1**	-	**42.3**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	980	36.3
Males (Adult)	72	36	3	75	90.6	980	40.3
Children							
Total	**144**	**72**	-	-	**92.0**	-	**41.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 830 feet	145	73	43.3
@ 880 feet	145	73	42.8
@ 930 feet	145	73	42.3
@ 980 feet	144	72	41.7
Amplified Speakers @ 365 feet	-	-	59.6
Total	**579**	**291**	**59.9**

Fourth & Central

Open Space Noise Calculation

Summary

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R5	435	66.6	66.6	69.7	71.4	74.7	No	71.2	72.5	76.2	No
Pop-up Plaza	R5	700	62.3	62.3	69.7	70.4	74.7	No	71.2	71.7	76.2	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	435	45.0
Males (Adult)	107	54	3	75	92.3	435	49.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**50.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	435	66.2

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	485	44.1
Males (Adult)	107	54	3	75	92.3	485	48.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**49.6**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	585	42.4
Males (Adult)	107	54	3	75	92.3	585	46.5
Children							
Total	**213**	**107**	-	-	**93.8**	-	**48.0**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	485	44.1
Males (Adult)	107	54	3	75	92.3	485	48.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**49.6**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	685	41.1
Males (Adult)	107	54	3	75	92.3	685	45.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**46.6**

Source:
[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 435 feet	213	107	50.5
@ 485 feet	213	107	49.6
@ 585 feet	213	107	48.0
@ 485 feet	213	107	49.6
@ 685 feet	213	107	46.6
Amplified Speakers			66.2
Total	**1065**	**535**	**66.6**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	700	39.2
Males (Adult)	73	37	3	75	90.7	700	43.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**44.7**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	700	62.1

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	750	38.6
Males (Adult)	73	37	3	75	90.7	750	42.7
Children							
Total	**145**	**73**	-	-	**92.1**	-	**44.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	800	38.0
Males (Adult)	73	37	3	75	90.7	800	42.2
Children							
Total	**145**	**73**	-	-	**92.1**	-	**43.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	850	37.5
Males (Adult)	72	36	3	75	90.6	850	41.5
Children							
Total	**144**	**72**	-	-	**92.0**	-	**43.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 700 feet	145	73	44.7
@ 750 feet	145	73	44.1
@ 800 feet	145	73	43.6
@ 850 feet	144	72	43.0
Amplified Speakers @ 365 feet	-	-	62.1
Total	**579**	**291**	**62.3**

Fourth & Central

Open Space Noise Calculation

Summary - Mitigated

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R5	435	65.7	65.7	69.7	71.2	74.7	No	71.2	72.3	76.2	No
Pop-up Plaza	R5	700	61.4	61.4	69.7	70.3	74.7	No	71.2	71.6	76.2	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	435	45.0
Males (Adult)	107	54	3	75	92.3	435	49.1
Children							
Total	**213**	**107**	-	-	**93.8**	-	**50.5**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	435	65.2

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	485	44.1
Males (Adult)	107	54	3	75	92.3	485	48.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**49.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	585	42.4
Males (Adult)	107	54	3	75	92.3	585	46.5
Children							
Total	**213**	**107**	-	-	**93.8**	-	**48.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	485	44.1
Males (Adult)	107	54	3	75	92.3	485	48.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**49.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	685	41.1
Males (Adult)	107	54	3	75	92.3	685	45.2
Children							
Total	**213**	**107**	-	-	**93.8**	-	**46.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 435 feet	213	107	50.5
@ 485 feet	213	107	49.6
@ 585 feet	213	107	48.0
@ 485 feet	213	107	49.6
@ 685 feet	213	107	46.6
Amplified Speakers			65.2
Total	**1065**	**535**	**65.7**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	700	39.2
Males (Adult)	73	37	3	75	90.7	700	43.3
Children							
Total	**145**	**73**	-	-	**92.1**	-	**44.7**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	700	61.1

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	750	38.6
Males (Adult)	73	37	3	75	90.7	750	42.7
Children							
Total	**145**	**73**	-	-	**92.1**	-	**44.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	800	38.0
Males (Adult)	73	37	3	75	90.7	800	42.2
Children							
Total	**145**	**73**	-	-	**92.1**	-	**43.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Reference Distance (ft)[1]	Reference Noise Level (dBA)[1]	Combined Noise Level (dBA)	Distance to Receptor (ft)	Noise Level at Receptor (dBA)
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	850	37.5
Males (Adult)	72	36	3	75	90.6	850	41.5
Children							
Total	**144**	**72**	-	-	**92.0**	-	**43.0**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	# of Individuals (estimated capacity)	# of Individuals Speaking (half of estimated capacity)	Noise Level at Receptor (dBA)
Total Capacity	579		
@ 700 feet	145	73	44.7
@ 750 feet	145	73	44.1
@ 800 feet	145	73	43.6
@ 850 feet	144	72	43.0
Amplified Speakers @ 365 feet	-	-	61.1
Total	**579**	**291**	**61.4**

Fourth & Central

Open Space Noise Calculation

Summary

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R6	800	61.4	61.4	66.7	67.8	71.7	No	62.7	65.1	67.7	No
Pop-up Plaza	R6	960	59.6	59.6	66.7	67.5	71.7	No	62.7	64.4	67.7	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	800	39.7
Males (Adult)	107	54	3	75	92.3	800	43.8
Children							
Total	**213**	**107**	-	-	**93.8**	-	**45.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	800	60.9

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	850	39.2
Males (Adult)	107	54	3	75	92.3	850	43.3
Children							
Total	**213**	**107**	-	-	**93.8**	-	**44.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	950	38.2
Males (Adult)	107	54	3	75	92.3	950	42.3
Children							
Total	**213**	**107**	-	-	**93.8**	-	**43.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	850	39.2
Males (Adult)	107	54	3	75	92.3	850	43.3
Children							
Total	**213**	**107**	-	-	**93.8**	-	**44.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1050	37.4
Males (Adult)	107	54	3	75	92.3	1050	41.4
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 800 feet	213	107	45.2
@ 850 feet	213	107	44.7
@ 950 feet	213	107	43.7
@ 850 feet	213	107	44.7
@ 1050 feet	213	107	42.9
Amplified Speakers			60.9
Total	**1065**	**535**	**61.4**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	960	36.5
Males (Adult)	73	37	3	75	90.7	960	40.6
Total	**145**	**73**	-	-	**92.1**	-	**42.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	91	91.0	960	59.3

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1010	36.0
Males (Adult)	73	37	3	75	90.7	1010	40.1
Total	**145**	**73**	-	-	**92.1**	-	**41.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1060	35.6
Males (Adult)	73	37	3	75	90.7	1060	39.7
Total	**145**	**73**	-	-	**92.1**	-	**41.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	1110	35.2
Males (Adult)	72	36	3	75	90.6	1110	39.2
Total	**144**	**72**	-	-	**92.0**	-	**40.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	579		
@ 960 feet	145	73	42.0
@ 1010 feet	145	73	41.6
@ 1060 feet	145	73	41.1
@ 1110 feet	144	72	40.7
Amplified Speakers @ 365 feet	-	-	59.3
Total	**579**	**291**	**59.6**

Fourth & Central

Open Space Noise Calculation

Summary - Mitigated

Outdoor Space	Nearest Receptor	Nearest Distance	Estimated Daytime Leq	Estimated Nighttime Leq	Daytime				Nighttime			
					Existing Ambient	Ambient + Project	Threshold	Exceed?	Existing Ambient	Ambient + Project	Threshold	Exceed?
Central Courtyard	R6	800	60.5	60.5	66.7	67.6	71.7	No	62.7	64.7	67.7	No
Pop-up Plaza	R6	960	58.7	58.7	66.7	67.3	71.7	No	62.7	64.1	67.7	No

Fourth & Central
Open Space Noise Calculation

Central Courtyard (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	800	39.7
Males (Adult)	107	54	3	75	92.3	800	43.8
Children							
Total	**213**	**107**	-	-	**93.8**	-	**45.2**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	800	59.9

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Center)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	850	39.2
Males (Adult)	107	54	3	75	92.3	850	43.3
Children							
Total	**213**	**107**	-	-	**93.8**	-	**44.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	950	38.2
Males (Adult)	107	54	3	75	92.3	950	42.3
Children							
Total	**213**	**107**	-	-	**93.8**	-	**43.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	850	39.2
Males (Adult)	107	54	3	75	92.3	850	43.3
Children							
Total	**213**	**107**	-	-	**93.8**	-	**44.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	213						
Females (Adult)	106	53	3	71	88.2	1050	37.4
Males (Adult)	107	54	3	75	92.3	1050	41.4
Children							
Total	**213**	**107**	-	-	**93.8**	-	**42.9**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Central Courtyard (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	1062		
@ 800 feet	213	107	45.2
@ 850 feet	213	107	44.7
@ 950 feet	213	107	43.7
@ 850 feet	213	107	44.7
@ 1050 feet	213	107	42.9
Amplified Speakers			59.9
Total	**1065**	**535**	**60.5**

Fourth & Central
Open Space Noise Calculation

Pop-up Plaza (Eastern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	960	36.5
Males (Adult)	73	37	3	75	90.7	960	40.6
Total	**145**	**73**	-	-	**92.1**	-	**42.0**
Amplified Music (85 dBA Leq at 25 feet per NOISE-PDF-5)			25	90	90.0	960	58.3

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Northern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1010	36.0
Males (Adult)	73	37	3	75	90.7	1010	40.1
Total	**145**	**73**	-	-	**92.1**	-	**41.6**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Southern Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	145						
Females (Adult)	72	36	3	71	86.6	1060	35.6
Males (Adult)	73	37	3	75	90.7	1060	39.7
Total	**145**	**73**	-	-	**92.1**	-	**41.1**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Western Boundary)							
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Reference Distance (ft)[1]**	**Reference Noise Level (dBA)[1]**	**Combined Noise Level (dBA)**	**Distance to Receptor (ft)**	**Noise Level at Receptor (dBA)**
Total Capacity	144						
Females (Adult)	72	36	3	71	86.6	1110	35.2
Males (Adult)	72	36	3	75	90.6	1110	39.2
Total	**144**	**72**	-	-	**92.0**	-	**40.7**

Source:

[1] American Journal of Audiology Vol. 7, p. 3 (1998)

Pop-up Plaza (Total)			
Category	**# of Individuals (estimated capacity)**	**# of Individuals Speaking (half of estimated capacity)**	**Noise Level at Receptor (dBA)**
Total Capacity	579		
@ 960 feet	145	73	42.0
@ 1010 feet	145	73	41.6
@ 1060 feet	145	73	41.1
@ 1110 feet	144	72	40.7
Amplified Speakers @ 365 feet	-	-	58.3
Total	**579**	**291**	**58.7**

Noise Measurements

Summary

File Name on Meter	R1 Daytime
File Name on PC	SLM_0004285_LxT_Data_257.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 11:29:57
Stop	2022-04-06 11:44:57
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:21
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

L_{ASeq}	67.7 dB		
LASE	97.3 dB		
EAS	590.874 µPa²h		
EAS8	18.908 mPa²h		
EAS40	94.540 mPa²h		
$L_{Apeak\ (max)}$	2022-04-06 11:34:14	99.0	dB
L_{ASmax}	2022-04-06 11:34:14	85.1	dB
L_{ASmin}	2022-04-06 11:42:14	55.5	dB
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	1	1.0	s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{CSeq}	77.4 dB		
L_{ASeq}	67.7 dB		
L_{CSeq} - L_{ASeq}	9.6 dB		
L_{AIeq}	69.5 dB		
L_{Aeq}	67.7 dB		
L_{AIeq} - L_{Aeq}	1.8 dB		

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	67.7					
$L_{S(max)}$	85.1	2022/04/06 11:34:14				
$L_{S(min)}$	55.5	2022/04/06 11:42:14				
$L_{Peak(max)}$	99.0	2022/04/06 11:34:14				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R1 Nighttime
File Name on PC	SLM_0004285_LxT_Data_268.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-07 00:03:44
Stop	2022-04-07 00:18:44
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
Overload	144.8 dB

	A	C	Z
Under Range Peak	**100.7**	97.7	102.7 dB
Under Range Limit	**37.9**	37.6	44.6 dB
Noise Floor	28.8	28.4	35.5 dB

Results

L_{ASeq}	60.6 dB	
LASE	90.2 dB	
EAS	115.882 µPa²h	
EAS8	3.708 mPa²h	
EAS40	18.541 mPa²h	
$L_{Apeak\ (max)}$	2022-04-07 00:16:42	93.6 dB
L_{ASmax}	2022-04-07 00:13:04	76.9 dB
L_{ASmin}	2022-04-07 00:10:36	48.5 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{CSeq}	68.3 dB	
L_{ASeq}	60.6 dB	
L_{CSeq} - L_{ASeq}	7.7 dB	
L_{AIeq}	63.1 dB	
L_{Aeq}	60.6 dB	
L_{AIeq} - L_{Aeq}	2.4 dB	

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	60.6					
$L_{S(max)}$	76.9	2022/04/07 0:13:04				
$L_{S(min)}$	48.5	2022/04/07 0:10:36				
$L_{Peak(max)}$	93.6	2022/04/07 0:16:42				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R2 Daytime
File Name on PC	SLM_0004285_LxT_Data_262.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 13:20:56
Stop	2022-04-06 13:35:56
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

LA_{Seq}	70.5	dB	
LASE	100.0	dB	
EAS	1.124	mPa^2h	
EAS8	35.958	mPa^2h	
EAS40	179.790	mPa^2h	
$LA_{peak\ (max)}$	2022-04-06 13:33:58	100.7	dB
LAS_{max}	2022-04-06 13:33:54	81.3	dB
LAS_{min}	2022-04-06 13:27:52	59.2	dB
SEA	-99.9	dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0	s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0	s
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s
LC_{Seq}	80.1	dB	
LA_{Seq}	70.5	dB	
LC_{Seq} - LA_{Seq}	9.6	dB	
LAI_{eq}	72.1	dB	
LA_{eq}	70.5	dB	
LAI_{eq} - LA_{eq}	1.6	dB	

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	70.5					
$L_{S(max)}$	81.3	2022/04/06 13:33:54				
$L_{S(min)}$	59.2	2022/04/06 13:27:52				
$L_{Peak(max)}$	100.7	2022/04/06 13:33:58				

# Overloads	0	
Overload Duration	0.0	s

Summary

File Name on Meter	R2 Nighttime
File Name on PC	SLM_0004285_LxT_Data_267.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 23:42:41
Stop	2022-04-06 23:57:41
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

LA_{Seq}	64.8	dB	
LASE	94.3	dB	
EAS	301.709	µPa²h	
EAS8	9.655	mPa²h	
EAS40	48.273	mPa²h	
$LA_{peak\ (max)}$	2022-04-06 23:54:12	105.0	dB
LAS_{max}	2022-04-06 23:54:12	85.8	dB
LAS_{min}	2022-04-06 23:42:41	56.3	dB
SEA	-99.9	dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	1	2.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LC_{Seq}	74.3	dB
LA_{Seq}	64.8	dB
LC_{Seq} - LA_{Seq}	9.5	dB
LAI_{eq}	67.6	dB
LA_{eq}	64.8	dB
LAI_{eq} - LA_{eq}	2.8	dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	64.8					
$L_{S(max)}$	85.8	2022/04/06 23:54:12				
$L_{S(min)}$	56.3	2022/04/06 23:42:41				
$L_{Peak(max)}$	105.0	2022/04/06 23:54:12				

# Overloads	0	
Overload Duration	0.0	s

Summary

File Name on Meter	R3 Daytime
File Name on PC	SLM_0004285_LxT_Data_261.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 12:53:20
Stop	2022-04-06 13:08:20
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

L_{ASeq}	58.5 dB		
LASE	88.0 dB		
EAS	70.719 µPa²h		
EAS8	2.263 mPa²h		
EAS40	11.315 mPa²h		
$L_{Apeak\ (max)}$	2022-04-06 12:55:36	90.1 dB	
L_{ASmax}	2022-04-06 12:55:14	69.5 dB	
L_{ASmin}	2022-04-06 13:00:40	52.3 dB	
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{CSeq}	70.9 dB		
L_{ASeq}	58.5 dB		
L_{CSeq} - L_{ASeq}	12.4 dB		
L_{AIeq}	62.2 dB		
L_{Aeq}	58.5 dB		
L_{AIeq} - L_{Aeq}	3.7 dB		

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	58.5					
$L_{S(max)}$	69.5	2022/04/06 12:55:14				
$L_{S(min)}$	52.3	2022/04/06 13:00:40				
$L_{Peak(max)}$	90.1	2022/04/06 12:55:36				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R3 Nighttime
File Name on PC	SLM_0004285_LxT_Data_263.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 22:25:27
Stop	2022-04-06 22:40:27
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

L_{ASeq}	61.8 dB		
LASE	91.4 dB		
EAS	152.330 µPa²h		
EAS8	4.875 mPa²h		
EAS40	24.373 mPa²h		
$L_{Apeak\ (max)}$	2022-04-06 22:33:23	101.0 dB	
L_{ASmax}	2022-04-06 22:33:23	79.5 dB	
L_{ASmin}	2022-04-06 22:32:35	53.3 dB	
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{CSeq}	71.2 dB		
L_{ASeq}	61.8 dB		
L_{CSeq} - L_{ASeq}	9.3 dB		
L_{AIeq}	65.9 dB		
L_{Aeq}	61.8 dB		
L_{AIeq} - L_{Aeq}	4.1 dB		

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	61.8					
$L_{S(max)}$	79.5	2022/04/06 22:33:23				
$L_{S(min)}$	53.3	2022/04/06 22:32:35				
$L_{Peak(max)}$	101.0	2022/04/06 22:33:23				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R4 Daytime
File Name on PC	SLM_0004285_LxT_Data_260.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 12:28:02
Stop	2022-04-06 12:43:02
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

L_{ASeq}	70.2 dB		
LASE	99.7 dB		
EAS	1.042 mPa²h		
EAS8	33.359 mPa²h		
EAS40	166.794 mPa²h		
$L_{Apeak\ (max)}$	2022-04-06 12:30:50	104.8	dB
L_{ASmax}	2022-04-06 12:30:50	85.9	dB
L_{ASmin}	2022-04-06 12:35:32	64.8	dB
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	1	1.3	s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{CSeq}	77.7 dB		
L_{ASeq}	70.2 dB		
L_{CSeq} - L_{ASeq}	7.5 dB		
L_{AIeq}	73.8 dB		
L_{Aeq}	70.2 dB		
L_{AIeq} - L_{Aeq}	3.6 dB		

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	70.2					
$L_{S(max)}$	85.9	2022/04/06 12:30:50				
$L_{S(min)}$	64.8	2022/04/06 12:35:32				
$L_{Peak(max)}$	104.8	2022/04/06 12:30:50				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R4 Nighttime
File Name on PC	SLM_0004285_LxT_Data_264.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 22:44:39
Stop	2022-04-06 22:59:39
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

L_{ASeq}	66.7 dB		
LASE	96.3 dB		
EAS	472.691 µPa²h		
EAS8	15.126 mPa²h		
EAS40	75.631 mPa²h		
$L_{Apeak\ (max)}$	2022-04-06 22:58:21	91.6 dB	
L_{ASmax}	2022-04-06 22:54:08	77.4 dB	
L_{ASmin}	2022-04-06 22:57:27	62.8 dB	
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{CSeq}	71.8 dB		
L_{ASeq}	66.7 dB		
L_{CSeq} - L_{ASeq}	5.1 dB		
L_{AIeq}	68.8 dB		
L_{Aeq}	66.7 dB		
L_{AIeq} - L_{Aeq}	2.0 dB		

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	66.7					
$L_{S(max)}$	77.4	2022/04/06 22:54:08				
$L_{S(min)}$	62.8	2022/04/06 22:57:27				
$L_{Peak(max)}$	91.6	2022/04/06 22:58:21				

# Overloads	0
Overload Duration	0.0 s

Summary

File Name on Meter	R5 Daytime
File Name on PC	SLM_0004285_LxT_Data_258.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 11:50:56
Stop	2022-04-06 12:05:56
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

L_{ASeq}	69.7	dB	
LASE	99.3	dB	
EAS	935.430	µPa²h	
EAS8	29.934	mPa²h	
EAS40	149.669	mPa²h	
$L_{Apeak\ (max)}$	2022-04-06 11:57:37	103.4	dB
L_{ASmax}	2022-04-06 11:57:38	90.6	dB
L_{ASmin}	2022-04-06 12:02:01	57.4	dB
SEA	-99.9	dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	1	4.6	s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s

L_{CSeq}	80.0	dB
L_{ASeq}	69.7	dB
L_{CSeq} - L_{ASeq}	10.3	dB
L_{AIeq}	73.5	dB
L_{Aeq}	69.7	dB
L_{AIeq} - L_{Aeq}	3.8	dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	69.7					
$L_{S(max)}$	90.6	2022/04/06 11:57:38				
$L_{S(min)}$	57.4	2022/04/06 12:02:01				
$L_{Peak(max)}$	103.4	2022/04/06 11:57:37				

# Overloads	0	
Overload Duration	0.0	s

Summary

File Name on Meter	R5 Nighttime
File Name on PC	SLM_0004285_LxT_Data_265.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 23:02:49
Stop	2022-04-06 23:17:49
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

L_{ASeq}	71.2 dB		
LASE	100.7 dB		
EAS	1.306 mPa²h		
EAS8	41.794 mPa²h		
EAS40	208.971 mPa²h		
$L_{Apeak\ (max)}$	2022-04-06 23:06:57	114.9	dB
L_{ASmax}	2022-04-06 23:06:57	96.9	dB
L_{ASmin}	2022-04-06 23:02:49	55.1	dB
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	1	4.8	s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s
L_{CSeq}	77.9 dB		
L_{ASeq}	71.2 dB		
L_{CSeq} - L_{ASeq}	6.7 dB		
L_{AIeq}	76.9 dB		
L_{Aeq}	71.2 dB		
L_{AIeq} - L_{Aeq}	5.7 dB		

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	71.2					
$L_{S(max)}$	96.9	2022/04/06 23:06:57				
$L_{S(min)}$	55.1	2022/04/06 23:02:49				
$L_{Peak(max)}$	114.9	2022/04/06 23:06:57				

# Overloads	0	
Overload Duration	0.0	s

Summary

File Name on Meter	R6 Daytime
File Name on PC	SLM_0004285_LxT_Data_259.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 12:08:37
Stop	2022-04-06 12:23:37
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamp	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	144.8 dB			
	A	**C**	**Z**	
Under Range Peak	**100.7**	97.7	102.7	dB
Under Range Limit	**37.9**	37.6	44.6	dB
Noise Floor	28.8	28.4	35.5	dB

Results

LA_{Seq}	66.7	dB	
LASE	96.2	dB	
EAS	462.558	µPa²h	
EAS8	14.802	mPa²h	
EAS40	74.009	mPa²h	
$LA_{peak\ (max)}$	2022-04-06 12:19:42	97.0	dB
LAS_{max}	2022-04-06 12:09:05	79.2	dB
LAS_{min}	2022-04-06 12:15:20	52.6	dB
SEA	-99.9	dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0	s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0	s
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s
LC_{Seq}	76.1	dB	
LA_{Seq}	66.7	dB	
LC_{Seq} - LA_{Seq}	9.4	dB	
LAI_{eq}	68.7	dB	
LA_{eq}	66.6	dB	
LAI_{eq} - LA_{eq}	2.1	dB	

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	66.6					
$L_{S(max)}$	79.2	2022/04/06 12:09:05				
$L_{S(min)}$	52.6	2022/04/06 12:15:20				
$L_{Peak(max)}$	97.0	2022/04/06 12:19:42				

# Overloads	0	
Overload Duration	0.0	s

Summary

File Name on Meter	R6 Nighttime
File Name on PC	SLM_0004285_LxT_Data_266.01.ldbin
Serial Number	0004285
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-04-06 23:23:29
Stop	2022-04-06 23:38:29
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	2022-04-06 11:22:19
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamp	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	144.8 dB		
	A	**C**	**Z**
Under Range Peak	**100.7**	97.7	102.7 dB
Under Range Limit	**37.9**	37.6	44.6 dB
Noise Floor	28.8	28.4	35.5 dB

Results

L_{ASeq}	62.7 dB	
LASE	92.3 dB	
EAS	186.761 µPa²h	
EAS8	5.976 mPa²h	
EAS40	29.882 mPa²h	
$L_{Apeak\ (max)}$	2022-04-06 23:36:39	92.3 dB
L_{ASmax}	2022-04-06 23:36:40	75.2 dB
L_{ASmin}	2022-04-06 23:30:56	51.2 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{CSeq}	70.8 dB	
L_{ASeq}	62.7 dB	
L_{CSeq} - L_{ASeq}	8.1 dB	
L_{AIeq}	64.4 dB	
L_{Aeq}	62.7 dB	
L_{AIeq} - L_{Aeq}	1.7 dB	

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	62.7					
$L_{S(max)}$	75.2	2022/04/06 23:36:40				
$L_{S(min)}$	51.2	2022/04/06 23:30:56				
$L_{Peak(max)}$	92.3	2022/04/06 23:36:39				

# Overloads	0
Overload Duration	0.0 s