

APPENDIX G

NOISE

**Table G-1
Noise Analysis Results**

Site	Day	Time Period	Measured Existing	TNM Existing	FTA Manual, Subway	Adjustment Factor	TNM NB	Actual NB	Actual NB Increase	TNM Build	Actual Build	Actual Build Increase	TNM Mit	Actual Mit	Actual Mit Increase
1	Non-Game	AM	82.9	69.1	81.4	1.2	<u>70.8</u>	83.0	0.1	69.6	82.9	-0.1	N/A	N/A	N/A
		MD	81.4	68.4	79.5	1.6	<u>69.0</u>	81.4	0.0	68.9	81.4	0.0	N/A	N/A	N/A
		PM	85.5	69.5	80.7	4.5	<u>70.1</u>	85.5	0.0	70.3	85.6	0.1	N/A	N/A	N/A
		SMD	82.8	68.5	0.0	14.3	<u>67.4</u>	82.7	-0.1	68.8	82.8	0.1	N/A	N/A	N/A
	Game	PrG	85.8	68.4	0.0	17.4	<u>68.5</u>	85.8	0.0	68.5	85.8	0.0	N/A	N/A	N/A
		SPrG	83.9	67.6	80.7	3.0	<u>67.3</u>	83.9	0.0	67.9	83.9	0.0	N/A	N/A	N/A
		SPoG	83.3	68.4	80.7	2.3	<u>68.7</u>	83.3	0.0	69.6	83.4	0.1	N/A	N/A	N/A
2	Non-Game	AM	67.3	68.5	N/A	-1.2	<u>69.1</u>	67.9	0.6	69.3	68.1	0.2	N/A	N/A	N/A
		MD	66.6	69.2	N/A	-2.6	<u>71.1</u>	68.5	1.9	71.1	68.5	0.0	N/A	N/A	N/A
		PM	66.8	70.3	N/A	-3.5	<u>71.4</u>	67.9	1.1	70.4	66.9	-1.0	N/A	N/A	N/A
		SMD	64.3	66.6	N/A	-2.3	<u>68.6</u>	66.3	2.0	69.5	67.2	0.9	N/A	N/A	N/A
	Game	PrG	77.4	69.2	N/A	8.2	<u>67.3</u>	75.5	-1.9	66.8	75.0	-0.5	N/A	N/A	N/A
		SPrG	67.0	69.0	N/A	-2.0	<u>70.3</u>	68.3	1.3	67.2	65.2	-3.1	N/A	N/A	N/A
		SPoG	64.9	68.5	N/A	-3.6	<u>67.4</u>	63.8	-1.1	66.6	63.0	-0.8	N/A	N/A	N/A
3	Non-Game	AM	69.3	67.0	N/A	2.3	67.5	69.8	0.5	68.8	71.1	1.3	69.0	71.3	1.5
		MD	70.5	66.6	N/A	3.9	67.0	70.9	0.4	68.9	72.8	1.9	68.9	72.8	1.9
		PM	71.9	63.9	N/A	8.0	<u>64.4</u>	72.4	0.5	65.9	73.9	1.5	66.2	74.2	1.8
		SMD	68.4	60.7	N/A	7.7	61.0	68.7	0.3	64.5	72.2	3.5	64.7	72.4	3.7
	Game	PrG	71.1	65.0	N/A	6.1	65.8	71.9	0.8	66.1	72.2	0.3	66.1	72.2	0.3
		SPrG	68.6	66.1	N/A	2.5	66.9	69.4	0.8	67.1	69.6	0.2	67.1	69.6	0.2
		SPoG	68.6	65.4	N/A	3.2	64.6	67.8	-0.8	65.1	68.3	0.5	65.8	69.0	1.2

**Table G-2
Rail Noise at Site 1**

Time	Distance	SEL	Cars	Speed	Volume	Adjust	Contribution
AM	22.36068	82	11	35	47	4	81.4
MD	22.36068	82	11	35	30	4	79.5
PM	22.36068	82	11	35	40	4	80.7
SMD	22.36068	82	11	35	20	4	77.7
PrG	22.36068	82	11	35	40	4	80.7
SPrG	22.36068	82	11	35	40	4	80.7
SPoG	22.36068	82	11	35	40	4	80.7

Table G-3
L₁₀ Values

Site	Day	Time Period	Measured Existing	Max Ex	Actual NB Increase	NB	Max NB	Actual Build Increase	B	Max B
1	Non-Game	AM	86.2	90.5	0.1	86.3	90.6	-0.1	86.2	90.9
		MD	83.4		0.1	83.5		0.0	83.5	
		PM	90.5		0.1	90.6		0.0	90.6	
		SMD	85.7		-0.6	85.1		0.7	85.8	
	Game	PrG	90.4		-0.2	90.2		0.7	90.9	
		SPrG	88.0		0.0	88.0		0.0	88.0	
		SPoG	86.1		0.0	86.1		0.0	86.1	
2	Non-Game	AM	69.9	80.5	0.5	70.4	78.0	0.3	70.7	79.0
		MD	69.6		2.1	71.7		0.7	72.4	
		PM	69.8		0.1	69.9		-0.9	69.0	
		SMD	66.0		2.7	68.7		0.0	68.7	
	Game	PrG	80.5		-2.5	78.0		1.0	79.0	
		SPrG	69.8		-1.8	68.0		-0.5	67.5	
		SPoG	67.4		-0.8	66.6		-0.7	65.9	
3	Non-Game	AM	70.8	73.3	0.5	71.3	73.7	1.3	72.6	75.3
		MD	72.2		0.4	72.6		1.9	74.5	
		PM	73.3		0.3	73.6		1.7	75.3	
		SMD	69.5		0.3	69.8		3.5	73.3	
	Game	PrG	72.9		0.8	73.7		0.3	74.0	
		SPrG	69.9		0.8	70.7		0.2	70.9	
		SPoG	70.4		-0.8	69.6		0.5	70.1	
6	Non-Game	AM	72.1	73.4	0.0	72.1	73.4	0.8	71.3	71.3
		MD	70.7		0.0	70.7		1.6	70.0	
		PM	73.4		0.0	73.4		1.2	70.6	

As described in Chapter 20, “Noise,” a number of locations within the district would require noise attenuation in order to avoid impacts from ambient noise. In order to avoid these impacts, an (E) designation would be mapped on these sites.

There are three levels of required noise attenuation depending upon the ambient noise levels: 30 dBA, 32 dBA, and 37 dBA. The text for the (E) designation for sites requiring 30 dBA is as follows:

“In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 30 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning sleeves or HUD approved fans.”

For sites requiring 32 dBA noise attenuation, the following (E) designation noise text would apply:

“In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 32 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.”

For facades requiring 37 dBA noise attenuation, the following (E) designation noise text would apply:

“In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 37 dBA window/wall attenuation in order to maintain an interior noise level of 45 dBA. To achieve 37 dBA of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially designed windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.”

With the attenuation measures specified above, the proposed plan would not result in any significant adverse noise impacts, and would meet CEQR guidelines. The (E) designations for these sites affected by ambient noise are presented in Table G-4.

**Table G-4
Noise Attenuation (E) Designations**

Block	Lot	Governing Noise Site	Minimum Required Attenuation
1820	1	4,5	<u>37</u>
1820	6	4	<u>37</u>
1820	9	6,4	30, <u>37</u> on North façade
1820	18	4	<u>37</u>
1820	34	6	30
1820	108	6,4	30, <u>37</u> on North façade
1821	1	4	<u>37</u>
1821	6	4	<u>37</u>
1821	16	6	30
1821	25	6	30
1821	27	6	30
1821	<u>35</u>	<u>6</u>	<u>30</u>
1822	1	5	<u>37</u>
1822	5	6	30
1822	7	6	30
1822	17	6	30
1822	21	6	30
1822	23	6	30
1822	28	6	30
1822	33	6	30
1822	55	6	30
1822	58	6	30
1823	1	5	<u>37</u>
1823	3	6	30

Table G-4 (cont'd)
Noise Attenuation (E) Designations

Block	Lot	Governing Noise Site	Minimum Required Attenuation
1823	5	6	30
1823	7	6	30
1823	12	6	30
1823	14	6	30
1823	19	6	30
1823	20	6	30
1823	21	6	30
1823	23	6	30
1823	26	6	30
1823	28	6	30
1823	33	6	30
1823	40	6	30
1823	44	6	30
1823	47	6	30
1823	52	6	30
1823	55	6	30
1823	58	6	30
1823	59	6	30
1823	60	5	<u>37</u>
1824	1	6,5	30, <u>37</u> on east façade
1824	12	6	30
1824	19	6	30
1824	21	6	30
1824	26	6	30
1824	28	6	30
1824	33	6	30
1824	38	6	30
1824	40	6	30
1824	45	6	30
1824	53	5	<u>37</u>
1825	1	5	<u>37</u>
1825	19	6	30
1825	21	6	30
1825	25	6	30
1825	28	6	30
1825	30	6	30
1825	37	6	30
1825	46	6	30
1825	48	6	30
1825	53	6	30
1825	55	6	30
1825	58	6	30
1826	1	5	<u>37</u>
1826	5	5	<u>37</u>
1826	14	6	30
1826	18	6	30
1826	20	7,6	<u>37</u> , 30 on north façade
1826	31	7	<u>37</u>
1826	35	7	<u>37</u>
1827	1	7	<u>37</u>
1828	1	4	<u>37</u>
1828	4	4	<u>37</u>
1828	8	4	<u>37</u>
1828	11	6	30
1828	13	6	30
1828	17	6	30

**Table G-4 (cont'd)
Noise Attenuation (E) Designations**

Block	Lot	Governing Noise Site	Minimum Required Attenuation
1828	21	6	30
1828	23	6	30
1828	29	6	30
1828	34	6	30
1828	37	6	30
1828	39	6	30
1829	19	6,4	30, <u>37</u> on North façade
1829	21	4	37
1829	40	6	30
1829	71	6	30
1830	9	6	30
1830	10	6	30
1830	21	6	30
1831	1	6	30
1831	10	6	30
1831	35	6	30
1832	1	6	30
1832	10	6	30
1833	103	7	<u>37</u>
1833	111	7	<u>37</u>
1833	117	7	<u>37</u>
1833	120	6	30
1833	141	6	30
1833	143	6	30
1833	151	6	30
1833	155	6	30
1833	158	6	30
1833	165	6	30
1833	166	6	30
1833	168	6	30
1833	170	6	30
1833	172	6	30
1833	177	6	30
1833	179	6	30
1833	180	6	30
1833	186	6	30
1833	188	6	30
1833	192	6	30
1833	197	6	30
1833	199	6	30
1833	201	6	30
1833	203	6	30
1833	212	6	30
1833	215	6	30
1833	230	6	30
1833	300	6	30
1833	425	6	30
1833	1	6,7	30, <u>37</u> on South façade

Notes: †Attenuation values shown assume a residential use; commercial uses would require 5 dBA less attenuation.

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