

**SHAFT 33B EQUIPMENT UTILIZATION TABLES
PREFERRED SITE & ALTERNATIVES
WATERMAIN CONNECTIONS**

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 59th and 1st
Average Conditions**

Equip. Name	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage							
		Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3	Stage 4A	Stage 4B	Stage 4C
Rock Drill (1/2)	90			<u>15</u>					
Rock Drill (1/2)	90			<u>15</u>					
Concrete Truck	85				<u>15</u>	<u>25</u>		<u>25</u>	
Concrete Truck	85						<u>5</u>		
Pneumatic hammer	83			<u>5</u>					
Jackhammer	83	<u>5</u>						10	
Rock Drill	83				25				
Backhoe	81	10						<u>25</u>	
Pile Drilling Rig	81	<u>25</u>							
Excavator	80	<u>25</u>		<u>15</u>		5	5		
FE Loader	79	<u>30</u>		<u>10</u>	<u>5</u>	<u>5</u>	<u>10</u>	10	<u>10</u>
Dump Truck at Idle	76	<u>5</u>					<u>5</u>	<u>5</u>	<u>5</u>
Flatbed Truck at Idle	76	5					5	5	5
Dump Truck at Idle	76			<u>5</u>					
Flatbed Truck at Idle	76			5	5	5			
Derrick Crane	75			<u>5</u>	<u>20</u>	<u>25</u>	10		
Telescoping Crane	82	20						<u>10</u>	
Compactor	73						5	10	
Welder	70	<u>10</u>		5	5	20	20	10	
Saw, electric	70	<u>10</u>		5	5	15	20	25	
Compressor, NYC	60	5		<u>70</u>	<u>70</u>	<u>5</u>	5	25	
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>10</u>	<u>25</u>			

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 59th and 1st
Peak Conditions**

Equip. Name	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage							
		Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3	Stage 4A	Stage 4B	Stage 4C
Rock Drill (1/2)	90			<u>75</u>					
Rock Drill (1/2)	90			<u>75</u>					
Concrete Truck	85				<u>75</u>	<u>75</u>		<u>75</u>	
Concrete Truck	85								
Pneumatic hammer	83								
Jackhammer	83								
Rock Drill	83								
Backhoe	81							<u>75</u>	
Pile Drilling Rig	81	<u>75</u>							
Excavator	80	<u>75</u>							
FE Loader	79	<u>75</u>		<u>75</u>			<u>75</u>		<u>75</u>
Dump Truck at Idle	76						<u>75</u>		<u>75</u>
Flatbed Truck at Idle	76								
Dump Truck at Idle	76								
Flatbed Truck at Idle	76								
Derrick Crane	75				<u>75</u>	<u>75</u>			
Telescoping Crane	82								
Compactor	73								
Welder	70								
Saw, electric	70								
Compressor, NYC	60			<u>75</u>	<u>75</u>	<u>75</u>			
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>75</u>	<u>75</u>			

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Watermain Construction - Block (w/o venturi)
Average Conditions**

<u>Equip. Name</u>	<u>Equip. ID</u>	<u>50 Foot Noise Level Leq (dBA)</u>	<u>Percentage of Time Used During Stage</u>			
			<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>	<u>Stage 4</u>
Pavement Cutter	PC	93	15			
Jackhammer	JH	83	15	15		
Compressor, NYC	C	60	25	25		
Paver	PAV	84				50
Excavator	EX	80	50	50	50	50
Dump Truck at Idle	DT	76	5		5	5
Flatbed Truck at Idle	FT	76	5		5	
Concrete Truck	CT	85		25		
Payloader	PL	79				25
Soil Compactor	SC	73				50
Telescoping Crane	TC	82			25	
Welder	Weld	70			25	
Saw, gas	SG	72	25	25		

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Watermain Construction - Blocks (w/ venturi)
Average Condition**

<u>Equip. Name</u>	<u>Equip. ID</u>	<u>50 Foot Noise Level Leq (dBA)</u>	<u>Percentage of Time Used During Stage</u>			
			<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>	<u>Stage 4</u>
Pavement Cutter	PC	93	15			
Jackhammer	JH	83	15	15		
Compressor, NYC	C	60	25	25		
Paver	PAV	84				50
Excavator	EX	80	50	50	50	50
Dump Truck at Idle	DT	76	5		5	5
Flatbed Truck at Idle	FT	76	5		5	
Concrete Truck	CT	85		25	20	
Payloader	PL	79			10	25
Soil Compactor	SC	73			10	50
Telescoping Crane	TC	82			25	
Welder	Weld	70			25	
Saw, gas	SG	72	25	25	25	

NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Watermain Construction - Block (w/o venturi)
Peak Conditions

Equip. Name	Equip. ID	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage			
			Stage 1	Stage 2	Stage 3	Stage 4
Pavement Cutter	PC	93	75			
Jackhammer	JH	83	75	75		
Compressor, NYC	C	60	75	75		
Paver	PAV	84				75
Excavator	Ex	80	75	75	75	
Dump Truck at Idle	DT	76	75		75	75
Dewatering Pump	DP	73		75	75	
Flatbed Truck at Idle	FT	76				
Concrete Truck	CT	85				
Payloader	PL	79				75
Soil Compactor	SC	73				
Telescoping Crane	TC	82				
Welder	Weld	70				
Saw, gas	SG	72				

NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Watermain Construction - Blocks (w/ venturi)
Peak Condition

Equip. Name	Equip. ID	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage			
			Stage 1	Stage 2	Stage 3	Stage 4
Pavement Cutter	PC	93	75			
Jackhammer	JH	83	75	75		
Compressor, NYC	C	60	75	75		
Paver	PAV	84				75
Excavator	Ex	80	75	75	75	
Dump Truck at Idle	DT	76	75		75	75
Dewatering Pump	DP	73		75	75	
Flatbed Truck at Idle	FT	76				
Concrete Truck	CT	85				
Payloader	PL	79				75
Soil Compactor	SC	73				
Telescoping Crane	TC	82				
Welder	Weld	70				
Saw, gas	SG	72				

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 59th and 2nd
Average Conditions**

Equip. Name	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage							
		Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3	Stage 4A	Stage 4B	Stage 4C
Rock Drill (1/2)	90			<u>15</u>					
Rock Drill (1/2)	90			<u>15</u>					
Concrete Truck	85				<u>15</u>	<u>25</u>	<u>5</u>	<u>25</u>	
Pneumatic hammer	83			<u>5</u>					
Jackhammer	83	<u>5</u>						10	
Rock Drill	83				25				
Backhoe	81	10						<u>25</u>	
Pile Drilling Rig	81	<u>25</u>							
Excavator	80	<u>25</u>		<u>15</u>			5		
FE Loader	79	<u>30</u>		<u>10</u>	<u>5</u>	<u>5</u>	<u>10</u>	10	<u>10</u>
Dump Truck at Idle	76	<u>5</u>		<u>5</u>			<u>5</u>	5	<u>5</u>
Flatbed Truck at Idle	76	5		5	5	5	5	5	5
Derrick Crane	75			<u>5</u>	<u>20</u>	<u>25</u>	10		
Telescoping Crane	82	20						<u>10</u>	
Compactor	73						5	10	
Welder	70	<u>10</u>		5	5	20	20	10	
Saw, electric	70	<u>10</u>		5	5	15	20	25	
Compressor, NYC	60	<u>5</u>		<u>70</u>	<u>70</u>	<u>5</u>	5	25	
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>10</u>	<u>25</u>			

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 59th and 2nd
Peak Conditions**

Equip. Name	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage							
		Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3	Stage 4A	Stage 4B	Stage 4C
Rock Drill (1/2)	90			<u>75</u>					
Rock Drill (1/2)	90			<u>75</u>					
Concrete Truck	85				<u>75</u>	<u>75</u>		<u>75</u>	
Pneumatic hammer	83								
Jackhammer	83								
Rock Drill	83								
Backhoe	81							<u>75</u>	
Pile Drilling Rig	81	<u>75</u>							
Excavator	80	<u>75</u>							
FE Loader	79	<u>75</u>		<u>75</u>			<u>75</u>		<u>75</u>
Dump Truck at Idle	76						<u>75</u>		<u>75</u>
Flatbed Truck at Idle	76								
Derrick Crane	75				<u>75</u>	<u>75</u>			
Telescoping Crane	82								
Compactor	73								
Welder	70								
Saw, electric	70								
Compressor, NYC	60			<u>75</u>	<u>75</u>	<u>75</u>			
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>75</u>	<u>75</u>			

NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 61st Street btw 1st and 2nd
Average Conditions

Equip. Name	Noise Levels	Percentage of Time Used During Stage							
		Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3	Stage 4A	Stage 4B	Stage 4C
Rock Drill (1/2)	90			<u>15</u>					
Rock Drill (1/2)	90			<u>15</u>					
Concrete Truck	85				<u>15</u>	<u>25</u>	<u>5</u>	<u>25</u>	
Pneumatic hammer	83			<u>5</u>					
Jackhammer	83	<u>5</u>						10	
Rock Drill	83				25				
Backhoe	81	10						<u>25</u>	
Pile Drilling Rig	81	<u>25</u>							
Excavator	80	<u>25</u>		<u>15</u>			5		
FE Loader	79	<u>30</u>		<u>10</u>	<u>5</u>	<u>5</u>	<u>10</u>	10	<u>10</u>
Dump Truck at Idle	76	<u>5</u>		<u>5</u>			<u>5</u>	5	<u>5</u>
Flatbed Truck at Idle	76	5		5	5	5	5	5	5
Derrick Crane	75			<u>5</u>	<u>20</u>	<u>25</u>	10		
Telescoping Crane	82	20						<u>10</u>	
Compactor	73						5	10	
Welder	70	<u>10</u>		5	5	20	20	10	
Saw, electric	70	<u>10</u>		5	5	15	20	25	
Compressor, NYC	60	<u>5</u>		<u>70</u>	<u>70</u>	<u>5</u>	5	25	
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>10</u>	<u>25</u>			

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 61st Street btw 1st and 2nd
Peak Conditions**

Equip. Name	Noise Levels	Percentage of Time Used During Stage							
		<u>Stage 1</u>	<u>Stage 2A</u>	<u>Stage 2B</u>	<u>Stage 2C</u>	<u>Stage 3</u>	<u>Stage 4A</u>	<u>Stage 4B</u>	<u>Stage 4C</u>
Rock Drill (1/2)	90			<u>75</u>					
Rock Drill (1/2)	90			<u>75</u>					
Concrete Truck	85				<u>75</u>	<u>75</u>		<u>75</u>	
Pneumatic hammer	83								
Jackhammer	83								
Rock Drill	83								
Backhoe	81							<u>75</u>	
Pile Drilling Rig	81	<u>75</u>							
Excavator	80	<u>75</u>							
FE Loader	79	<u>75</u>		<u>75</u>			<u>75</u>		<u>75</u>
Dump Truck at Idle	76						<u>75</u>		<u>75</u>
Flatbed Truck at Idle	76								
Derrick Crane	75				<u>75</u>	<u>75</u>			
Telescoping Crane	82								
Compactor	73								
Welder	70								
Saw, electric	70								
Compressor, NYC	60			<u>75</u>	<u>75</u>	<u>75</u>			
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>75</u>	<u>75</u>			

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 54th and 2nd
Average Conditions**

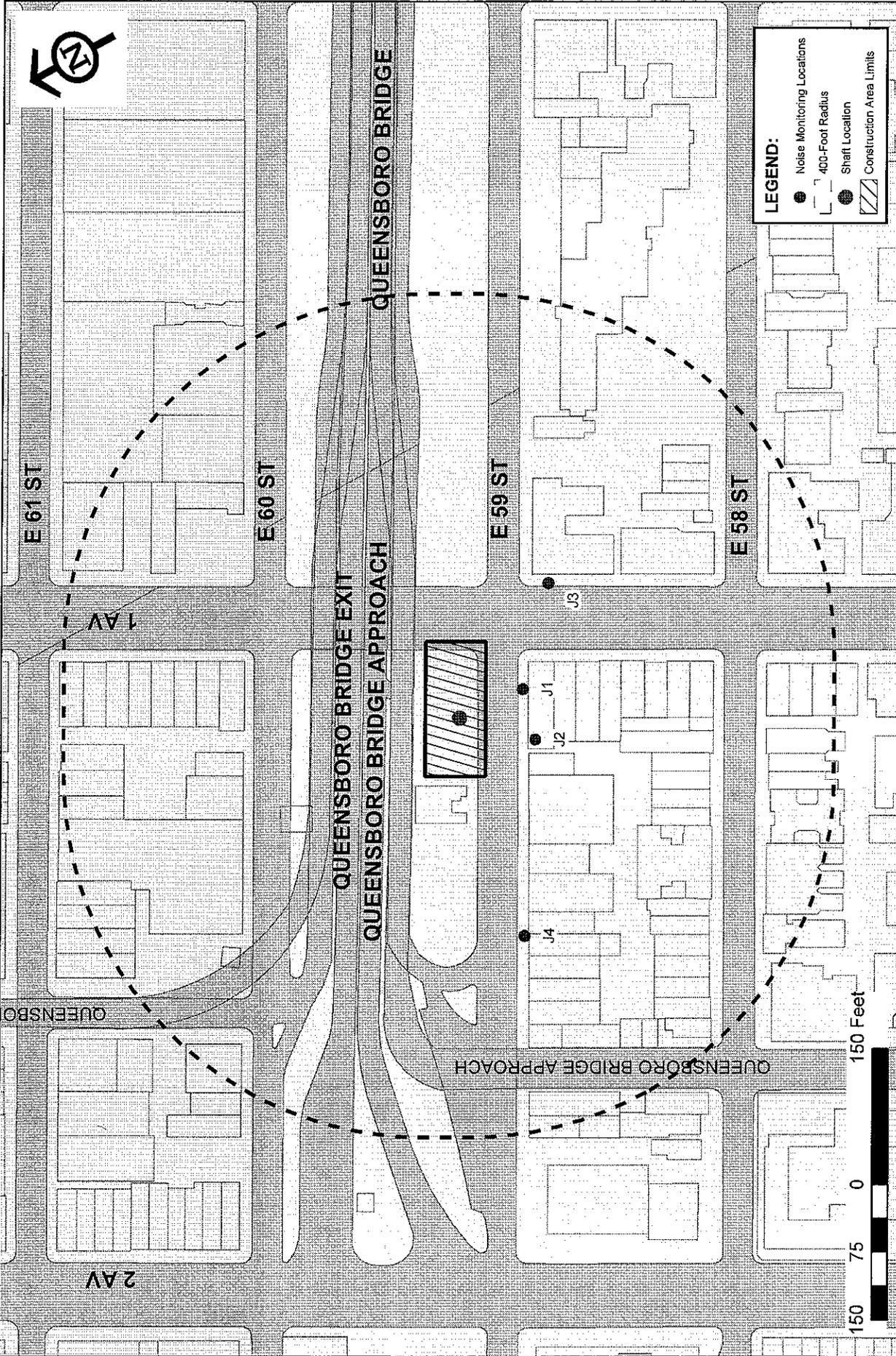
Equip. Name	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage							
		Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3	Stage 4A	Stage 4B	Stage 4C
Rock Drill (1/2)	90			<u>20</u>					
Rock Drill (1/2)	90			<u>20</u>					
Concrete Truck	85				<u>15</u>	<u>25</u>	<u>5</u>	<u>25</u>	
Pneumatic hammer	83			<u>10</u>					
Jackhammer	83	<u>5</u>						10	
Rock Drill	83				25				
Backhoe	81							<u>25</u>	
Pile Drilling Rig	81								
Excavator	80	<u>10</u>		<u>15</u>			5		
FE Loader	79	<u>20</u>		<u>10</u>	<u>5</u>	<u>5</u>	<u>10</u>	10	<u>10</u>
Dump Truck at Idle	76	<u>5</u>		<u>5</u>			<u>5</u>	5	<u>5</u>
Flatbed Truck at Idle	76	5		5	5	5	5	5	5
Derrick Crane	75	10		<u>5</u>	<u>20</u>	<u>25</u>	10		
Telescoping Crane	82							<u>10</u>	
Compactor	73						5	10	
Welder	70	<u>10</u>		5	5	20	20	10	
Saw, electric	70	<u>10</u>		5	5	15	20	25	
Compressor, NYC	60	<u>5</u>		<u>70</u>	<u>70</u>	<u>5</u>	5	25	
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>15</u>	<u>25</u>			

**NYC DEP Shaft 33B EIS
Noise Analysis Input Table
Site: 54th and 2nd
Peak Conditions**

Equip. Name	50 Foot Noise Level Leq (dBA)	Percentage of Time Used During Stage							
		Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3	Stage 4A	Stage 4B	Stage 4C
Rock Drill (1/2)	90			<u>75</u>					
Rock Drill (1/2)	90			<u>75</u>					
Concrete Truck	85				<u>75</u>	<u>75</u>		<u>75</u>	
Pneumatic hammer	83								
Jackhammer	83								
Rock Drill	83								
Backhoe	81							<u>75</u>	
Pile Drilling Rig	81								
Excavator	80	<u>75</u>							
FE Loader	79	<u>75</u>		<u>75</u>			<u>75</u>		<u>75</u>
Dump Truck at Idle	76						<u>75</u>		<u>75</u>
Flatbed Truck at Idle	76								
Derrick Crane	75				<u>75</u>	<u>75</u>			
Telescoping Crane	82								
Compactor	73								
Welder	70								
Saw, electric	70								
Compressor, NYC	60			<u>75</u>	<u>75</u>	<u>75</u>			
Raise Bore Machine	54		<u>80</u>						
Concrete Pump	53				<u>75</u>	<u>75</u>			

**SHAFT 33B AMBIENT NOISE MONITORING DATA
PREFERRED SITE**

Source: Department of Information and Telecommunications, NYC Landbase, 2000.



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
 PROPOSED SHAFT 33B TO CITY WATER TUNNEL NO. 3
 STAGE 2 - MANHATTAN LEG
 PREFERRED SHAFT SITE
 NOISE MONITORING LOCATIONS



PREFERRED
 SHAFT SITE

**SHAFT 33B AMBIENT NOISE MONITORING DATA
PREFERRED SITE**

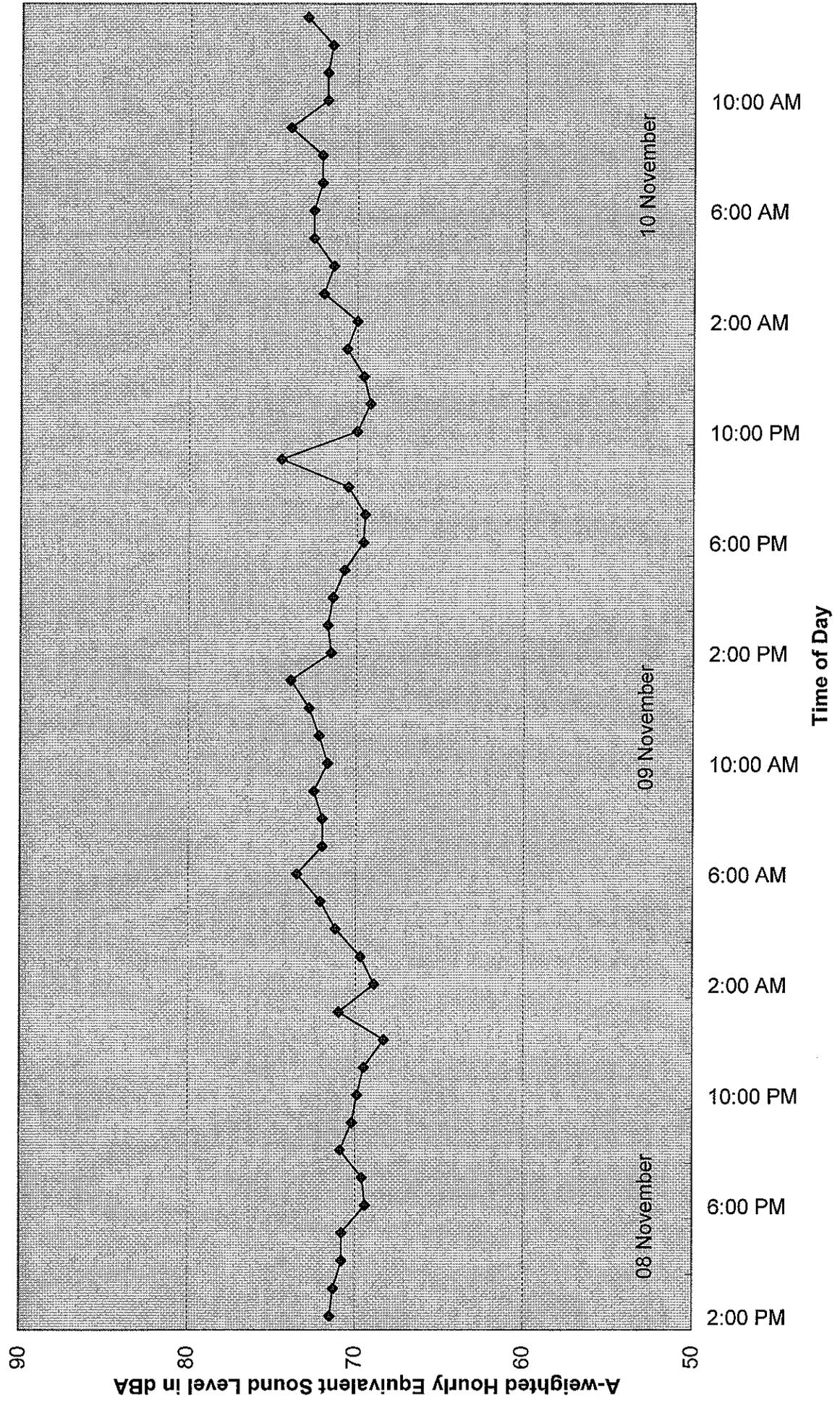
DATE	TIME	November 8-10, 2004			
		33B-J1	33B-J2	33B-J3	33B-J4
08Nov 04	2:00 PM	73	71	76	74
08Nov 04	3:00 PM	74	71	75	72
08Nov 04	4:00 PM	74	70	74	72
08Nov 04	5:00 PM	76	70	74	72
08Nov 04	6:00 PM	74	69	74	73
08Nov 04	7:00 PM	73	69	75	73
08Nov 04	8:00 PM	73	69	73	73
08Nov 04	9:00 PM	73	69	76	75
08Nov 04	10:00 PM	74	69	76	74
08Nov 04	11:00 PM	72	69	74	74
09Nov 04	12:00 AM	71	69	72	73
09Nov 04	1:00 AM	71	68	72	74
09Nov 04	2:00 AM	71	68	72	74
09Nov 04	3:00 AM	71	68	73	75
09Nov 04	4:00 AM	74	69	75	74
09Nov 04	5:00 AM	72	69	74	74
09Nov 04	6:00 AM	75	71	76	74
09Nov 04	7:00 AM	74	69	74	71
09Nov 04	8:00 AM	75	67	74	71
09Nov 04	9:00 AM	75	67	73	71
09Nov 04	10:00 AM	74	69	75	71
09Nov 04	11:00 AM	76	70	76	72
09Nov 04	12:00 PM	74	70	75	73
09Nov 04	1:00 PM	75	70	76	76
09Nov 04	2:00 PM	74	70	75	73
09Nov 04	3:00 PM	75	71	75	71
09Nov 04	4:00 PM	74	69	73	70
09Nov 04	5:00 PM	75	69	74	70
09Nov 04	6:00 PM	74	69	74	71
09Nov 04	7:00 PM	73	70	74	70
09Nov 04	8:00 PM	73	70	74	70
09Nov 04	9:00 PM	73	70	74	72
09Nov 04	10:00 PM	72	69	73	71
09Nov 04	11:00 PM	72	68	73	70
10Nov 04	12:00 AM	72	68	73	72
10Nov 04	1:00 AM	71	68	71	69
10Nov 04	2:00 AM	70	67	77	70
10Nov 04	3:00 AM	70	67	73	73
10Nov 04	4:00 AM	70	68	79	71
10Nov 04	5:00 AM	73	69	75	73
10Nov 04	6:00 AM	74	70	75	73
10Nov 04	7:00 AM	75	70	78	71
10Nov 04	8:00 AM	74	69	74	72
10Nov 04	9:00 AM	74	70	76	78
10Nov 04	10:00 AM	75	69	74	78
10Nov 04	11:00 AM	74	70	77	77
10Nov 04	12:00 PM	73	70	77	79
10Nov 04	1:00 PM	75	70	76	82

Minimum $L_{eq}(t)$	33B-J1	33B-J2	33B-J3	33B-J4
First Shift Min.	73	67	73	71
Second Shift Min.	72	69	73	70
Nighttime Min.	70	67	71	69

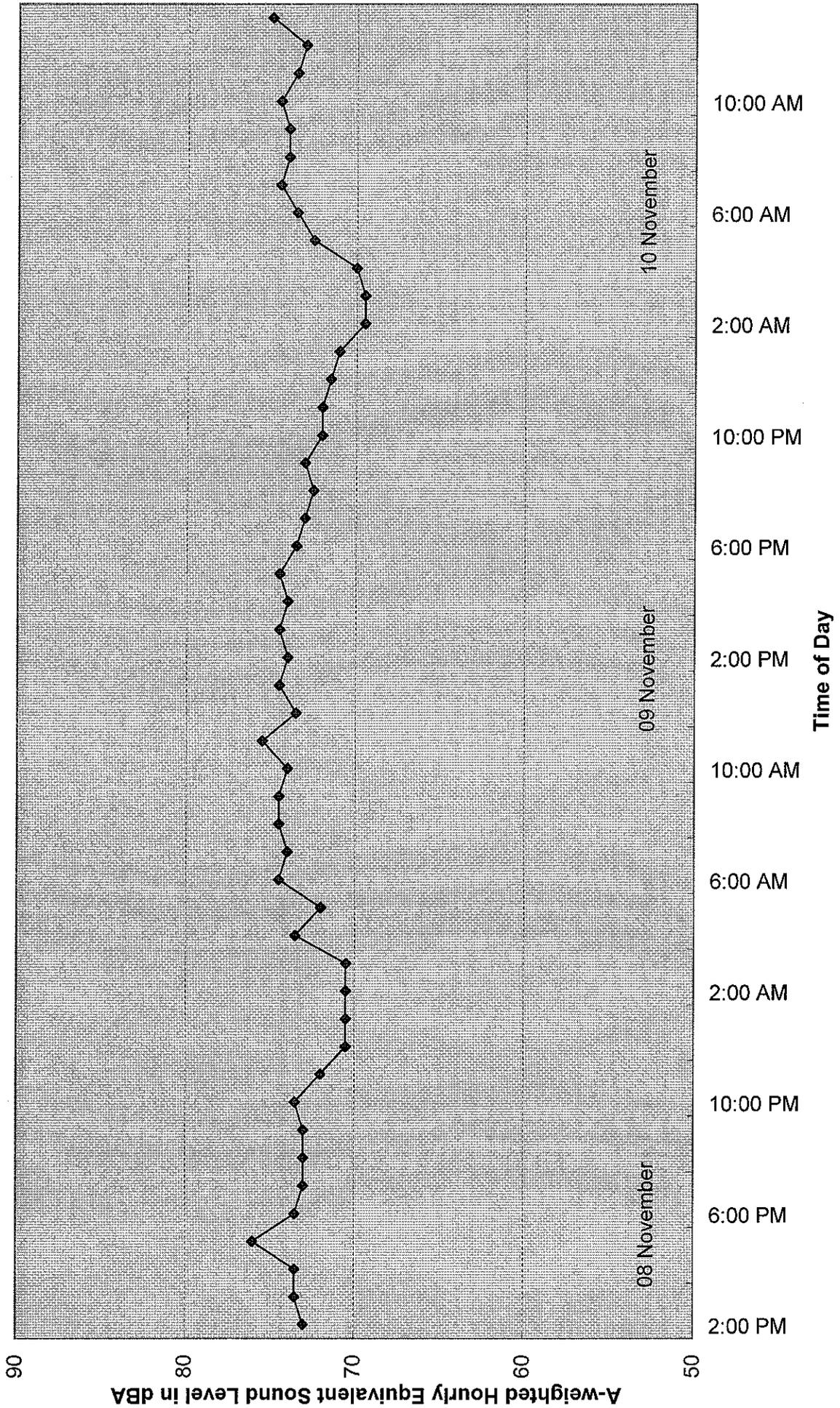
LEGEND:

	First Shift (07:00 to 15:00)
	Second Shift (15:00 to 23:00)
	Nighttime (23:00 to 07:00)

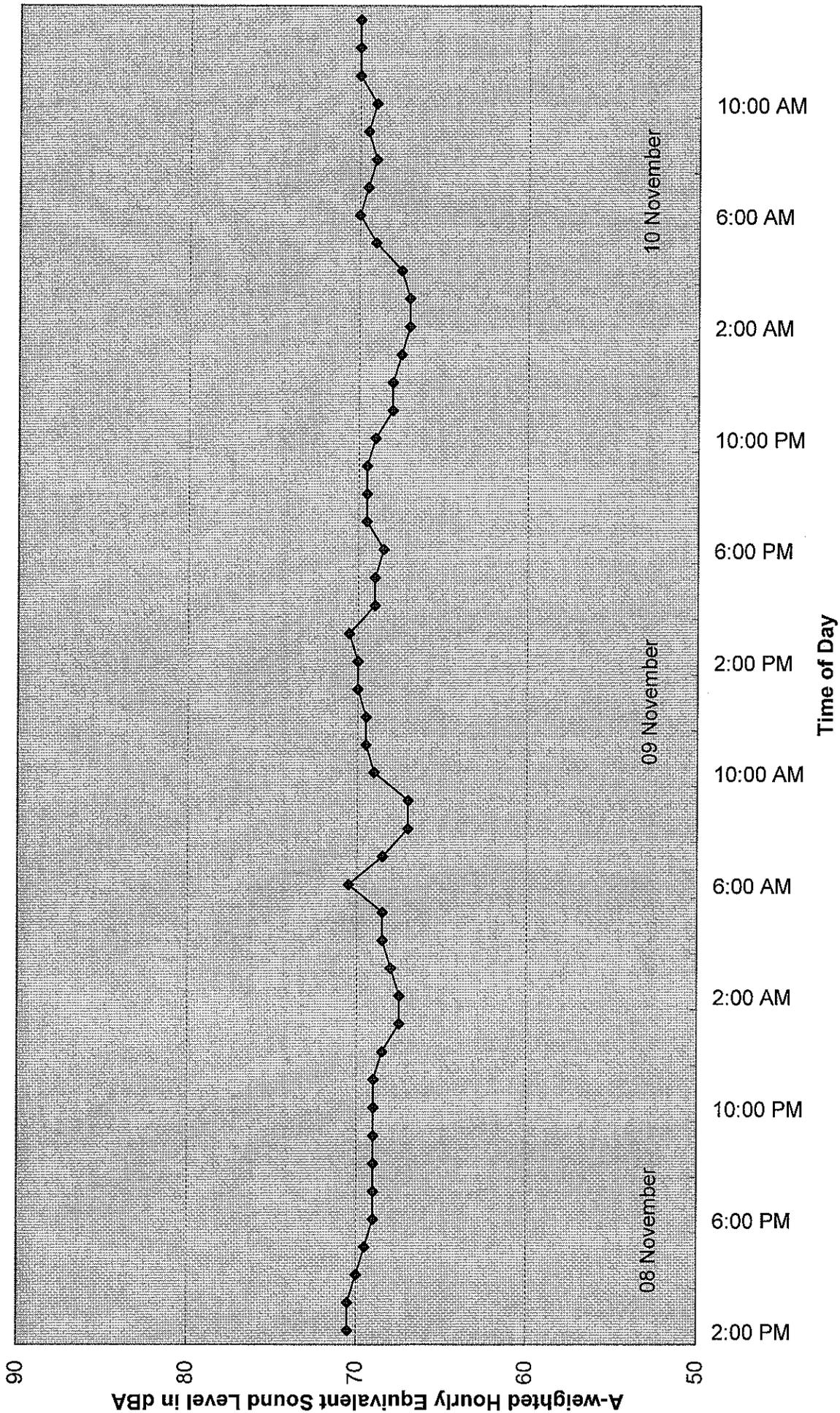
Location 33B-J4
Tree on south side of E. 59th Street midway of block between 1st Avenue and 2nd Avenue
Hourly Equivalent Baseline Ambient Sound Levels
November 08 to 10, 2004



Location 33B-J1
Tree along E. 59th Street near southwest corner of E. 59th Street and 1st Avenue
Hourly Equivalent Baseline Ambient Sound Levels
November 08 to 10, 2004



Location 33B-J2
Fifth floor rooftop of 346 E. 59th Street residence on the southwest corner of E. 59th Street and 1st Avenue
Hourly Equivalent Baseline Ambient Sound Levels
November 08 to 10, 2004



Location 33B-J3
Tree along 1st Avenue near southeast corner of E. 59th Street and 1st Avenue
Hourly Equivalent Baseline Ambient Sound Levels
November 08 to 10, 2004

