

**Appendix H: Construction Impacts**  
H-4 Noise

## Construction Noise Analysis--Equipment Distances

Receiver	Coordinates		Address			
1	595282	4547153	15 N Tappan Zee Landing			
Equipment Name			Equipment Coordinates		Distance (m)	Distance (ft)
Bridge- mid--size Generator 8			595106	4547009	227	693
Bridge- Compressor 3			595105	4547011	227	693
Bridge- Concrete Pump 3			595103	4547009	230	701
Bridge- Compressor 2			595150	4546957	236	721
Bridge- mid--size Generator 7			595151	4546956	237	722
Bridge- Concrete Pump 2			595147	4546956	239	728
Bridge- mid--size Generator 6			595168	4546927	254	773
Bridge- mid--size Generator 9			595051	4547045	255	777
Bridge- Concrete Pump 4			595050	4547047	255	778
Bridge- Compressor 4			595050	4547044	257	782
Bridge- Compressor 1			595164	4546924	257	784
Bridge- Concrete Pump 1			595166	4546922	259	788
Bridge- mid--size Generator 10			594998	4547091	291	887
Bridge- Concrete Pump 5			594997	4547092	292	889
Bridge- Compressor 5			594996	4547090	293	892
Bridge- Large Generator 7			595225	4546862	297	904
Bridge- mid--size Generator 23			595227	4546860	298	909
Bridge- Water Pump 7			595230	4546857	301	917
Bridge- mid--size Generator 11			594967	4547060	329	1002
Bridge- Compressor 6			594963	4547063	331	1010

Receiver	Coordinates		Address			
2	595237	4546833	Thruway Property			
Equipment Name			Equipment Coordinates		Distance (m)	Distance (ft)
Bridge- Water Pump 7			595230	4546857	25	77
Bridge- Large Generator 6			595260	4546821	25	77
Bridge- mid--size Generator 22			595262	4546819	28	86
Bridge- mid--size Generator 23			595227	4546860	29	88
Landing- Roller 1			595242	4546801	32	96
Bridge- Large Generator 7			595225	4546862	32	97
Bridge- Water Pump 6			595265	4546815	32	98
Landing- Paver 1			595218	4546783	53	162
Landing- Compressor 1			595260	4546784	54	164
Landing- mid-size generator 1			595269	4546769	71	217
Bridge- Rock socket Drill Rig 1			595162	4546838	75	228
Bridge- Pile Driving Hammer (100			595162	4546837	75	229
Bridge- Pile Vibratory Hammer 1			595159	4546842	79	240
Bridge- Pile Driving Hammer (150			595158	4546834	79	241
Bridge- Freeze pipe rotary drilling			595155	4546839	83	252
Bridge- Water Pump 1			595154	4546831	83	253
Bridge- mid--size Generator 1			595153	4546833	84	256
Bridge- Large Generator 1			595152	4546834	85	260
Bridge- Concrete Pump 1			595166	4546922	114	347
Bridge- mid--size Generator 6			595168	4546927	117	356

## Construction Noise Analysis--Equipment Distances

Receiver	Coordinates		Address		
3	595272	4546585	Thruway Property		
Equipment Name					
Equipment Name		Equipment Coordinates		Distance (m)	Distance (ft)
Landing- 2 mini Excavators		595228	4546598	46	140
Landing- mid size Loader		595215	4546598	59	179
Landing- 2 mini Excavators		595202	4546610	75	227
Landing- Mid-size Generator		595208	4546628	77	236
Landing- Compressor 2		595201	4546624	82	249
Landing- 1 Crawler Crane (100T)		595178	4546630	105	320
Landing- Concrete Pump 2		595174	4546629	108	329
Landing - 1 Large Loader		595388	4546665	141	429
Landing - 1 Excavator		595387	4546675	146	444
Landing- Concrete Pump		595410	4546644	150	456
Landing- Paver		595428	4546616	159	483
Landing- Water Pump		595414	4546667	163	498
Landing- Roller		595433	4546615	164	499
Landing- 1 Large Generator		595401	4546686	164	499
Landing- Compressor 1		595398	4546691	165	502
Landing- mid-size generator 1		595269	4546769	184	561
Landing- All-terrain Crane (80T)		595432	4546680	186	566
Landing- Compressor 1		595260	4546784	199	608
Landing- Paver 1		595218	4546783	205	625
Landing- Roller 1		595242	4546801	219	666

Receiver	Coordinates		Address		
4	595167	4546414	92 Paulding Ave		
Equipment Name					
Equipment Name		Equipment Coordinates		Distance (m)	Distance (ft)
Landing- mid size Loader		595215	4546598	191	582
Landing- 2 mini Excavators		595228	4546598	195	594
Landing- 2 mini Excavators		595202	4546610	200	609
Landing- Compressor 2		595201	4546624	213	650
Landing- Concrete Pump 2		595174	4546629	216	657
Landing- 1 Crawler Crane (100T)		595178	4546630	217	661
Landing- Mid-size Generator		595208	4546628	218	666
Landing- Paver		595428	4546616	330	1006
Landing- Roller		595433	4546615	334	1017
Landing - 1 Large Loader		595388	4546665	335	1020
Landing- Concrete Pump		595410	4546644	335	1020
Landing - 1 Excavator		595387	4546675	341	1041
Landing- Water Pump		595414	4546667	353	1077
Landing- 1 Large Generator		595401	4546686	359	1095
Landing- Compressor 1		595398	4546691	361	1100
Landing- mid-size generator 1		595269	4546769	370	1127
Landing- Paver 1		595218	4546783	373	1137
Landing- All-terrain Crane (80T)		595432	4546680	376	1145
Landing- Compressor 1		595260	4546784	382	1164
Landing- Roller 1		595242	4546801	395	1204

## Construction Noise Analysis--Equipment Distances

Receiver	Coordinates		Address	
5	590995	4548070	5 Edgewater Ln	
Equipment Name	Equipment Coordinates		Distance (m)	Distance (ft)
Landing- 2 mini Excavators	590697	4547644	520	1584
Landing- Concrete Pump	590690	4547649	520	1585
Bridge- Large Generator 1	590797	4547584	525	1600
Landing- Loader- mid	590699	4547636	525	1600
Bridge- Water pump 1	590798	4547583	525	1602
Bridge- Mid size Generator 1	590798	4547582	526	1604
Bridge- Pile Vibratory Hammer 1	590792	4547584	526	1604
Bridge- Pile Driving Hammer (100	590795	4547580	529	1614
Bridge- Freeze Pipe Rotary Drill Ri	590795	4547580	529	1614
Bridge- Rock Socket Drill Rig 1	590787	4547581	531	1618
Landing- 2 mini Excavators	590695	4547631	532	1620
Bridge- Pile Driving Hammer 2 (15	590790	4547577	534	1628
Landing- Concrete Pump 2	590710	4547611	540	1646
Landing- 1 Crawler Crane	590699	4547617	541	1648
Landing- 1 Large Generator	590702	4547615	541	1650
Landing- Water Pump	590702	4547612	543	1656
Landing- Compressor 1	590699	4547614	544	1658
Landing - 1 Loader- large	590714	4547602	546	1665
Landing - 1 Excavators- long reach	590717	4547596	550	1676
Landing- All-terrain Crane	590717	4547592	553	1685



Receiver	Coordinates		Address	
6	590763	4547697	Thruway Property	
Equipment Name	Equipment Coordinates		Distance (m)	Distance (ft)
Landing- 2 mini Excavators	590697	4547644	85	258
Landing- Concrete Pump	590690	4547649	88	268
Landing- Loader- mid	590699	4547636	88	269
Landing- 2 mini Excavators	590695	4547631	95	290
Landing- Concrete Pump 2	590710	4547611	101	308
Landing- 1 Crawler Crane	590699	4547617	102	311
Landing- 1 Large Generator	590702	4547615	103	313
Landing- Water Pump	590702	4547612	105	319
Landing- Compressor 1	590699	4547614	106	322
Landing - 1 Loader- large	590714	4547602	108	328
Landing - 1 Excavators- long reach	590717	4547596	111	340
Landing- All-terrain Crane	590717	4547592	115	350
Bridge- Pile Vibratory Hammer 1	590792	4547584	116	354
Bridge- Rock Socket Drill Rig 1	590787	4547581	118	360
Bridge- Large Generator 1	590797	4547584	118	361
Landing- Mid-size Generator	590713	4547590	119	361
Landing- Compressor 2	590715	4547588	119	363
Bridge- Water pump 1	590798	4547583	119	364
Bridge- Mid size Generator 1	590798	4547582	120	367
Bridge- Pile Driving Hammer (100	590795	4547580	121	370

## Construction Noise Analysis--Equipment Distances

Receiver	Coordinates		Address	
7	590713	4547475	24 River Rd	
<b>Equipment Name</b>				
<b>Equipment Coordinates</b>		<b>Distance (m)</b>	<b>Distance (ft)</b>	
Landing- Compressor 2	590715	4547588	113	343
Landing- Mid-size Generator	590713	4547590	114	348
Landing- All-terrain Crane	590717	4547592	117	355
Landing - 1 Excavators- long reach	590717	4547596	121	367
Landing - 1 Loader- large	590714	4547602	126	385
Bridge- Pile Driving Hammer 2 (15	590790	4547577	127	387
Bridge- Rock Socket Drill Rig 1	590787	4547581	129	393
Bridge- Freeze Pipe Rotary Drill Ri	590795	4547580	132	403
Bridge- Pile Driving Hammer (100	590795	4547580	132	404
Bridge- Pile Vibratory Hammer 1	590792	4547584	134	409
Landing- Concrete Pump 2	590710	4547611	136	414
Bridge- Mid size Generator 1	590798	4547582	136	415
Bridge- Water pump 1	590798	4547583	137	417
Bridge- mid size Generator 2	590835	4547537	137	417
Bridge- Large Generator 1	590797	4547584	137	418
Landing- Water Pump	590702	4547612	137	419
Bridge- Compressor 1	590838	4547535	138	421
Landing- Compressor 1	590699	4547614	139	424
Landing- 1 Large Generator	590702	4547615	140	427
Bridge- Concrete Pump 1	590842	4547531	140	427

Receiver	Coordinates		Address	
8	590668	4547121	66 River Rd	
<b>Equipment Name</b>				
<b>Equipment Coordinates</b>		<b>Distance (m)</b>	<b>Distance (ft)</b>	
Bridge- Compressor 4	590973	4547393	409	1246
Bridge- mid size Generator 5	590974	4547396	411	1254
Bridge- Concrete Pump 4	590978	4547399	416	1269
Bridge- mid size Generator 4	590935	4547442	417	1273
Bridge- Compressor 3	590933	4547444	418	1273
Bridge- Concrete Pump 3	590938	4547440	418	1273
Bridge- Concrete Pump 2	590887	4547484	424	1291
Bridge- Compressor 2	590884	4547487	425	1295
Bridge- mid size Generator 3	590882	4547489	425	1297
Bridge- Compressor 5	591031	4547357	434	1321
Bridge- mid size Generator 6	591033	4547359	436	1329
Bridge- Concrete Pump 5	591035	4547362	439	1338
Bridge- Concrete Pump 1	590842	4547531	445	1356
Bridge- Compressor 1	590838	4547535	447	1364
Bridge- mid size Generator 2	590835	4547537	448	1367
Landing- Compressor 2	590715	4547588	469	1430
Bridge- Compressor 6	591091	4547324	469	1430
Landing- Mid-size Generator	590713	4547590	471	1434
Bridge- Pile Driving Hammer 2 (15	590790	4547577	471	1437
Bridge- mid size Generator 7	591093	4547328	473	1441

## Construction Noise Analysis--Equipment Distances

Receiver	Coordinates		Address	
9	590650	4548020	Smith Ave near Broadway	
Equipment Name	Equipment Coordinates		Distance (m)	Distance (ft)
Landing- Concrete Pump 2	590600	4547949	87	265
Landing- Concrete Truck 2	590600	4547946	90	273
Landing- All-terrain Crane	590600	4547944	92	280
Landing- Mid-size Generator	590600	4547938	96	292
Landing- Compressor 2	590601	4547935	99	300
Landing- 1 Crawler Crane	590597	4547922	111	339
Landing- Concrete Pump	590606	4547912	117	355
Landing- Concrete Truck 1	590607	4547911	118	359
Landing- Water Pump	590596	4547896	136	413
Landing- Long reach Excavator	590614	4547884	141	429
Landing- Compressor 1	590594	4547888	143	436
Landing- Muck away Trucks	590602	4547883	145	442
Landing- 1 Large Generator	590595	4547886	145	443
Landing- Medium Loader	590613	4547877	148	450
Landing- Delivery Trucks	590602	4547879	149	454
Landing- Muck Away Trucks	590605	4547863	164	499
Landing - 2 Mini- Excavators	590622	4547854	168	513
Landing - 1 Large Loader	590621	4547845	178	542
Landing - 2 Mini- Excavators	590624	4547837	185	563
Landing- Muck Away Trucks	590607	4547903	124	379

Receiver	Coordinates		Address	
10	590585	4547967	Elizabeth and Broadway	
Equipment Name	Equipment Coordinates		Distance (m)	Distance (ft)
Landing- Concrete Pump 2	590600	4547949	23	71
Landing- Concrete Truck 2	590600	4547946	26	78
Landing- All-terrain Crane	590600	4547944	28	85
Landing- Mid-size Generator	590600	4547938	32	99
Landing- Compressor 2	590601	4547935	36	109
Landing- 1 Crawler Crane	590597	4547922	47	143
Landing- Concrete Pump	590606	4547912	59	180
Landing- Concrete Truck 1	590607	4547911	61	185
Landing- Water Pump	590596	4547896	72	220
Landing- Compressor 1	590594	4547888	79	242
Landing- 1 Large Generator	590595	4547886	82	251
Landing- Muck away Trucks	590602	4547883	86	261
Landing- Long reach Excavator	590614	4547884	88	268
Landing- Delivery Trucks	590602	4547879	90	274
Landing- Medium Loader	590613	4547877	94	287
Landing- Muck Away Trucks	590605	4547863	106	324
Landing - 2 Mini- Excavators	590622	4547854	119	363
Landing - 1 Large Loader	590621	4547845	127	388
Landing - 2 Mini- Excavators	590624	4547837	135	413
Landing- Muck Away Trucks	590607	4547903	68	206

## Construction Noise Analysis--Truck Distances

Receiver	Coordinates		Address	
1	595282	4547153	15 N Tappan Zee Landing	
Equipment Name	Equipment Coordinates	Distance (m)	Distance (ft)	
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	595409	4546646	522	1592
concrete truck 2	595180	4546627	536	1633
delivery truck	595410	4546678	492	1500
muck truck	595415	4546680	491	1497
muck truck	595221	4546622	534	1628
muck truck	595444	4546640	538	1639
muck truck	595180	4546617	546	1663
<b>Trucks Used in Bridge Construction</b>				
concrete truck	595169	4546923	257	782
concrete truck	595149	4546954	239	730
concrete truck	595105	4547007	230	700
concrete truck	595051	4547048	254	774
concrete truck	594998	4547093	290	885
concrete truck	594964	4547059	331	1010
concrete truck	594909	4547099	377	1148
concrete truck	594939	4547144	344	1047
concrete truck	595172	4546885	290	883
concrete truck	595182	4546955	222	677
concrete truck	595152	4547028	181	551
concrete truck	595155	4546999	199	608
delivery truck	595095	4547197	192	587
delivery truck	595250	4546794	361	1099
delivery truck	595178	4546924	252	767
delivery truck	595182	4546941	235	716
muck truck	595213	4547180	74	227
muck truck	595254	4546789	365	1113
muck truck	595161	4546830	345	1052
muck truck	595169	4546862	312	951

Receiver	Coordinates		Address	
2	595237	4546833	Thruway Property	
Equipment Name	Equipment Coordinates	Distance (m)	Distance (ft)	
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	595409	4546646	253	772
concrete truck 2	595180	4546627	214	651
delivery truck	595410	4546678	232	706
muck truck	595415	4546680	234	715
muck truck	595221	4546622	211	643
muck truck	595444	4546640	283	861
muck truck	595180	4546617	223	681
<b>Trucks Used in Bridge Construction</b>				
concrete truck	595169	4546923	113	345
concrete truck	595149	4546954	150	456
concrete truck	595105	4547007	219	668
concrete truck	595051	4547048	285	868
concrete truck	594998	4547093	354	1079
concrete truck	594964	4547059	355	1081
concrete truck	594909	4547099	423	1289
concrete truck	594939	4547144	431	1314
concrete truck	595172	4546885	83	254
concrete truck	595182	4546955	134	407
concrete truck	595152	4547028	213	649
concrete truck	595155	4546999	185	565
delivery truck	595095	4547197	391	1192
delivery truck	595250	4546794	41	124
delivery truck	595178	4546924	109	332
delivery truck	595182	4546941	122	371
muck truck	595213	4547180	348	1060
muck truck	595254	4546789	47	142
muck truck	595161	4546830	77	234
muck truck	595169	4546862	75	228

## Construction Noise Analysis--Truck Distances

Receiver	Coordinates		Address	
3	595272	4546585	Thruway Property	
Equipment Name	Equipment Coordinates	Distance (m)	Distance (ft)	
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	595409	4546646	149	456
concrete truck 2	595180	4546627	101	308
delivery truck	595410	4546678	166	505
muck truck	595415	4546680	172	523
muck truck	595221	4546622	63	193
muck truck	595444	4546640	181	551
muck truck	595180	4546617	97	297
<b>Trucks Used in Bridge Construction</b>				
concrete truck	595169	4546923	353	1077
concrete truck	595149	4546954	389	1185
concrete truck	595105	4547007	454	1385
concrete truck	595051	4547048	513	1564
concrete truck	594998	4547093	578	1761
concrete truck	594964	4547059	565	1723
concrete truck	594909	4547099	630	1919
concrete truck	594939	4547144	651	1984
concrete truck	595172	4546885	316	964
concrete truck	595182	4546955	380	1159
concrete truck	595152	4547028	459	1399
concrete truck	595155	4546999	430	1311
delivery truck	595095	4547197	637	1942
delivery truck	595250	4546794	210	641
delivery truck	595178	4546924	352	1072
delivery truck	595182	4546941	367	1119
muck truck	595213	4547180	598	1822
muck truck	595254	4546789	205	624
muck truck	595161	4546830	269	820
muck truck	595169	4546862	296	902

Receiver	Coordinates		Address	
4	595167	4546414	92 Paulding Ave	
Equipment Name	Equipment Coordinates	Distance (m)	Distance (ft)	
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	595409	4546646	335	1022
concrete truck 2	595180	4546627	214	651
delivery truck	595410	4546678	359	1093
muck truck	595415	4546680	364	1110
muck truck	595221	4546622	216	657
muck truck	595444	4546640	358	1092
muck truck	595180	4546617	204	621
<b>Trucks Used in Bridge Construction</b>				
concrete truck	595169	4546923	509	1552
concrete truck	595149	4546954	540	1647
concrete truck	595105	4547007	597	1819
concrete truck	595051	4547048	645	1966
concrete truck	594998	4547093	701	2135
concrete truck	594964	4547059	677	2062
concrete truck	594909	4547099	733	2233
concrete truck	594939	4547144	765	2332
concrete truck	595172	4546885	471	1437
concrete truck	595182	4546955	541	1650
concrete truck	595152	4547028	614	1873
concrete truck	595155	4546999	585	1784
delivery truck	595095	4547197	787	2398
delivery truck	595250	4546794	389	1186
delivery truck	595178	4546924	510	1556
delivery truck	595182	4546941	527	1608
muck truck	595213	4547180	767	2339
muck truck	595254	4546789	385	1174
muck truck	595161	4546830	416	1269
muck truck	595169	4546862	449	1367



## Construction Noise Analysis--Truck Distances

Receiver	Coordinates		Address	
5	590995	4548070	5 Edgewater Ln	
<b>Equipment Name</b>				
<b>Equipment Coordinates</b>		<b>Distance (m)</b>	<b>Distance (ft)</b>	
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	590691	4547648	521	1587
concrete truck 2	590711	4547610	541	1648
delivery truck	590692	4547634	531	1619
muck truck	590713	4547592	555	1692
muck truck	590691	4547636	530	1616
muck truck	590706	4547615	539	1641
muck truck	590713	4547602	547	1667
<b>Trucks Used in Bridge Construction</b>				
concrete truck	590841	4547532	559	1705
concrete truck	590888	4547483	597	1819
concrete truck	590939	4547439	633	1930
concrete truck	590979	4547401	668	2037
concrete truck	591036	4547365	706	2151
concrete truck	591096	4547334	743	2263
concrete truck	591157	4547305	781	2382
concrete truck	590794	4547613	499	1521
concrete truck	590817	4547584	518	1578
concrete truck	590788	4547598	515	1570
concrete truck	590784	4547591	524	1596
concrete truck	590782	4547582	532	1621
delivery truck	590704	4547610	544	1657
delivery truck	590804	4547612	496	1511
delivery truck	590925	4547478	595	1815
delivery truck	590939	4547465	608	1852
muck truck	590713	4547592	555	1692
muck truck	590703	4547612	543	1654
muck truck	590809	4547619	488	1487
muck truck	590782	4547562	550	1677



Receiver	Coordinates		Address	
6	590763	4547697	Thruway Property	
<b>Equipment Name</b>				
<b>Equipment Coordinates</b>		<b>Distance (m)</b>	<b>Distance (ft)</b>	
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	590691	4547648	88	267
concrete truck 2	590711	4547610	102	310
delivery truck	590692	4547634	95	290
muck truck	590713	4547592	117	356
muck truck	590691	4547636	95	289
muck truck	590706	4547615	100	304
muck truck	590713	4547602	108	329
<b>Trucks Used in Bridge Construction</b>				
concrete truck	590841	4547532	183	557
concrete truck	590888	4547483	248	755
concrete truck	590939	4547439	312	951
concrete truck	590979	4547401	366	1116
concrete truck	591036	4547365	430	1310
concrete truck	591096	4547334	492	1501
concrete truck	591157	4547305	555	1693
concrete truck	590794	4547613	89	272
concrete truck	590817	4547584	126	383
concrete truck	590788	4547598	102	311
concrete truck	590784	4547591	108	330
concrete truck	590782	4547582	116	354
delivery truck	590704	4547610	105	320
delivery truck	590804	4547612	94	286
delivery truck	590925	4547478	272	828
delivery truck	590939	4547465	291	888
muck truck	590713	4547592	117	356
muck truck	590703	4547612	104	317
muck truck	590809	4547619	90	275
muck truck	590782	4547562	136	414

## Construction Noise Analysis--Truck Distances

Receiver	Coordinates		Address	
7	590713	4547475	24 River Rd	
Equipment Name	Equipment Coordinates		Distance (m)	Distance (ft)
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	590691	4547648	174	529
concrete truck 2	590711	4547610	135	410
delivery truck	590692	4547634	160	487
muck truck	590713	4547592	117	355
muck truck	590691	4547636	162	495
muck truck	590706	4547615	140	427
muck truck	590713	4547602	126	385
<b>Trucks Used in Bridge Construction</b>				
concrete truck	590841	4547532	140	426
concrete truck	590888	4547483	175	532
concrete truck	590939	4547439	228	696
concrete truck	590979	4547401	276	842
concrete truck	591036	4547365	341	1041
concrete truck	591096	4547334	408	1244
concrete truck	591157	4547305	475	1448
concrete truck	590794	4547613	160	487
concrete truck	590817	4547584	150	458
concrete truck	590788	4547598	144	438
concrete truck	590784	4547591	135	412
concrete truck	590782	4547582	127	388
delivery truck	590704	4547610	135	412
delivery truck	590804	4547612	164	501
delivery truck	590925	4547478	211	644
delivery truck	590939	4547465	226	690
muck truck	590713	4547592	117	355
muck truck	590703	4547612	138	419
muck truck	590809	4547619	172	525
muck truck	590782	4547562	111	338

Receiver	Coordinates		Address	
8	590668	4547121	66 River Rd	
Equipment Name	Equipment Coordinates		Distance (m)	Distance (ft)
<b>Trucks Used in Landing Construction</b>				
concrete truck 1	590691	4547648	527	1606
concrete truck 2	590711	4547610	491	1495
delivery truck	590692	4547634	513	1564
muck truck	590713	4547592	473	1441
muck truck	590691	4547636	515	1571
muck truck	590706	4547615	496	1511
muck truck	590713	4547602	482	1470
<b>Trucks Used in Bridge Construction</b>				
concrete truck	590841	4547532	446	1358
concrete truck	590888	4547483	423	1290
concrete truck	590939	4547439	417	1272
concrete truck	590979	4547401	419	1277
concrete truck	591036	4547365	442	1347
concrete truck	591096	4547334	478	1457
concrete truck	591157	4547305	522	1592
concrete truck	590794	4547613	508	1548
concrete truck	590817	4547584	486	1481
concrete truck	590788	4547598	492	1499
concrete truck	590784	4547591	484	1474
concrete truck	590782	4547582	475	1448
delivery truck	590704	4547610	490	1495
delivery truck	590804	4547612	510	1553
delivery truck	590925	4547478	440	1341
delivery truck	590939	4547465	438	1334
muck truck	590713	4547592	473	1441
muck truck	590703	4547612	493	1501
muck truck	590809	4547619	517	1576
muck truck	590782	4547562	456	1389

## Construction Noise Analysis Results

Receptor	Existing Noise Levels ( $L_{eq}$ )	RCNM 1 Noise Levels ( $L_{eq}$ ) <sup>1</sup>	RCNM 2 Noise Levels ( $L_{eq}$ ) <sup>2</sup>	RCNM 3 Noise Levels ( $L_{eq}$ ) <sup>3</sup>	TNM Noise Levels ( $L_{eq}$ ) <sup>4</sup>	Combined Construction Noise Levels ( $L_{eq}$ )	Total Noise Levels During Construction ( $L_{eq}$ )	Increase Over Existing (dBA)
1	60-68	66	64	51	43	68	69-71	1-11
2	67-70	87	70	59	53	87	87	17-20
3	56-61	73	59	65	64	74	74	13-18
4	63-71	65	65	58	44	68	69-73	6-10
5	49-56	69	56	51	35	69	69	13-20
6	64-68	81	68	66	65	81	81	13-17
7	65-67	81	67	63	45	81	81	14-16
8	56-63	67	58	52	32	67	67-68	4-12
9	69	71				71	73	4
10	61	80				80	80	19
11	58	60				60	62	4

<sup>1</sup> For Sites 1-8, this represents the 20 loudest and closest pieces of construction equipment to the receptor location. For Sites 9-11, this represents all construction equipment, including trucks.

<sup>2</sup> For Sites 1-8, this represents the stationary noise component of the construction trucks associated with construction on the bridge.

<sup>3</sup> For Sites 1-8, this represents the stationary noise component of the construction trucks associated with construction on the landings.

<sup>4</sup> For Sites 1-8, this represents the mobile noise component of all construction trucks.

## Construction Noise Analysis Results with Abatement

Receptor	Existing Noise Levels ( $L_{eq}$ )	RCNM 1 Noise Levels ( $L_{eq}$ ) <sup>1</sup>	RCNM 2 Noise Levels ( $L_{eq}$ ) <sup>2</sup>	RCNM 3 Noise Levels ( $L_{eq}$ ) <sup>3</sup>	TNM Noise Levels ( $L_{eq}$ ) <sup>4</sup>	Combined Construction Noise Levels ( $L_{eq}$ )	Total Noise Levels During Construction ( $L_{eq}$ )	Increase Over Existing (dBA)
1	60-68	66	64	51	43	68	69-71	1-11
2	67-70	81	70	59	53	82	82	12-15
3	56-61	70	59	65	64	72	72	11-16
4	63-71	65	65	58	44	68	69-73	2-10
5	49-56	63	56	51	35	64	64-65	8-16
6	64-68	75	68	66	65	76	76-77	8-13
7	65-67	75	67	63	45	76	76-77	9-12
8	56-63	63	58	52	32	64	65-67	2-11
9	69	69				69	72	3
10	61	76				76	76	15
11	58	60				60	62	4

<sup>1</sup> For Sites 1-8, this represents the 20 loudest and closest pieces of construction equipment to the receptor location. For Sites 9-11, this represents all construction equipment, including trucks.

<sup>2</sup> For Sites 1-8, this represents the stationary noise component of the construction trucks associated with construction on the bridge.

<sup>3</sup> For Sites 1-8, this represents the stationary noise component of the construction trucks associated with construction on the landings.

<sup>4</sup> For Sites 1-8, this represents the mobile noise component of all construction trucks.

## Construction Vibration Assessment

### Calculations for Construction Vibration

$$PPV_{\text{equipment}} = PPV_{\text{ref}} * (25/D)^{1.5}$$

where:

PPV<sub>equip</sub> is the peak particle velocity in in/sec of the equipment at the receiver location

PPV<sub>ref</sub> is the reference vibration level in in/sec at 25 feet

D is the distance from the equipment to the received location in feet

Equipment		PPVr	Criterion PPV	Impact Distance (ft)	PPVe
Pile Driver (Impact)	upper rang	1.518	0.5	50	0.5
Pile Driver (sonic)	upper rang	0.734	0.5	33	0.5
Clam Shovel Drop (slurry wall)		0.202	0.5	13	0.5
Vibratory Roller		0.210	0.5	15	0.5
Hoe Ram/Large Bulldozer/Caisson Drilling		0.089	0.5	8	0.5
Loaded Truck		0.076	0.5	8	0.5
Jackhammer		0.035	0.5	5	0.5

### Calculations for Construction Ground-Boren Vibration

$$Lv(D) = Lv(25ft) - 30 \log(D/25)$$

where:

L<sub>v</sub>(D) is the vibration level in VdB of the equipment at the receiver location

L<sub>v</sub>(ref) is the reference vibration level in VdB at 25 feet

D is the distance from the equipment to the receiver location in feet

Equipment		Lv(25ft)	Criterion PPV	Impact Distance (ft)	PPVe
Pile Driver (Impact)	upper rang	112	65	900	65
Pile Driver (sonic)	upper rang	105	65	550	65
Clam Shovel Drop (slurry wall)		94	65	230	65
Vibratory Roller		94	65	230	65
Hoe Ram/Large Bulldozer/Caisson Drilling		87	65	140	65
Loaded Truck		86	65	125	65
Jackhammer		79	65	75	65