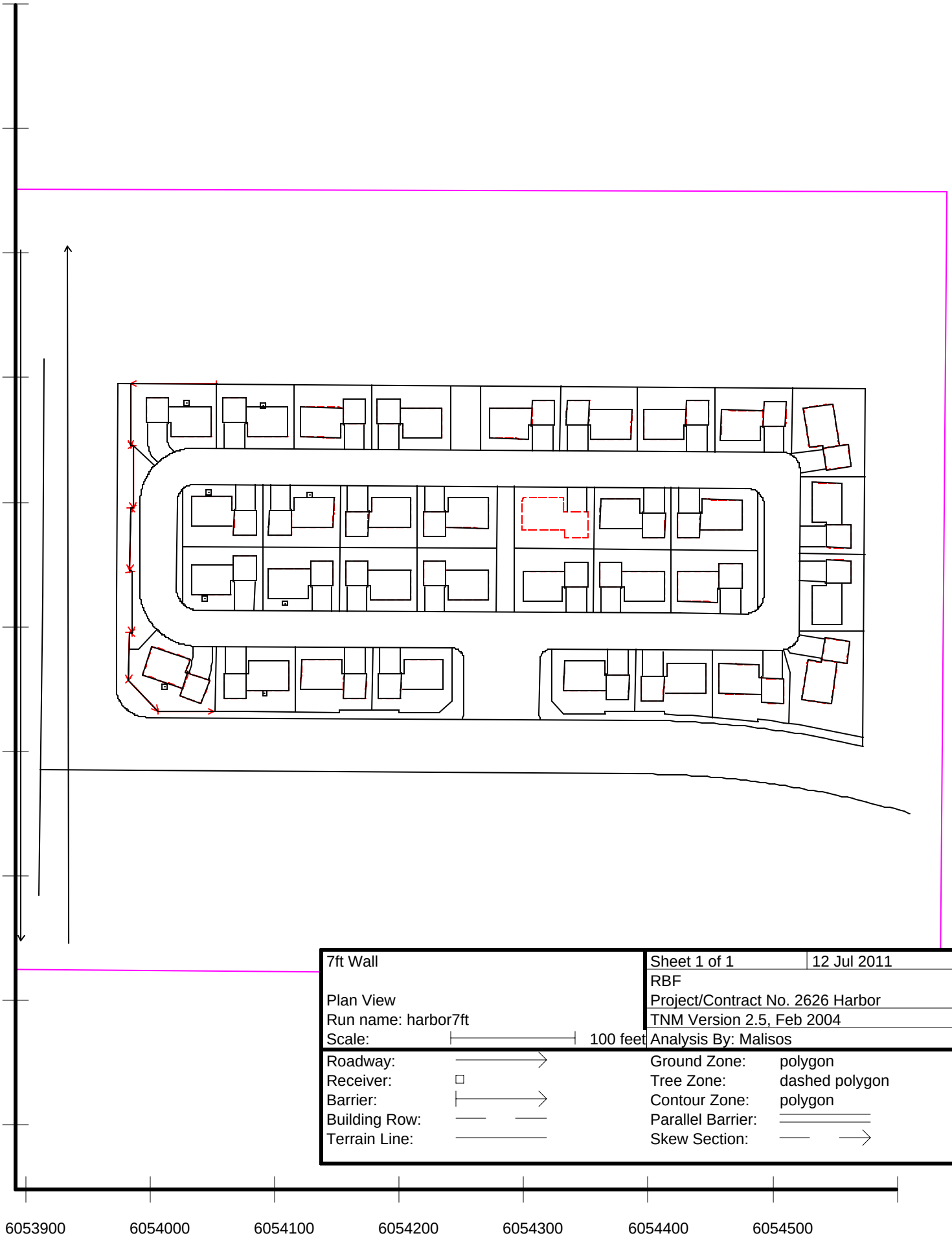
NOISE DATA

A. MODELING DATA



7ft Wall	Sheet 1 of 1 — 12 Jul 2011
	RBF
Plan View	Project/Contract No. 2626 Harbor
Run name: harbor7ft	TNM Version 2.5, Feb 2004
Scale: 100 feet	Analysis By: Malisos

Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

RBF **12 July 2011**
Malisos **TNM 2.5**

INPUT: TRAFFIC FOR Lden
PROJECT/CONTRACT: **2626 Harbor**
RUN: **7ft Wall**

Roadway	Points																						
Name	Name	No.	Segment																				
			ADT	Autos				MTrucks				HTrucks				Buses				Motorcycles			
				%D	%E	%N	S	%D	%E	%N	S	%D	%E	%N	S	%D	%E	%N	S	%D	%E	%N	S
			veh/24hrs	%	%	%	mph	%	%	%	mph	%	%	%	mph	%	%	%	mph	%	%	%	mph
Harbor NB	point1	1	20225	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0
	point2	2																					
Harbor SB	point3	3	20225	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0
	point4	4																					

RBF 12 July 2011
Malisos TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 2626 Harbor
RUN: 7ft Wall

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Harbor NB	45.0	point1	1	6,053,833.5	2,190,747.8	0.00				Average	
		point2	2	6,053,833.0	2,191,307.2	0.00					
Harbor SB	45.0	point3	3	6,053,795.0	2,191,303.8	0.00				Average	
		point4	4	6,053,795.5	2,190,749.8	0.00					

RBF 12 July 2011
Malisos TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 2626 Harbor
RUN: 7ft Wall

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing Lden	Impact Criteria Lden	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
15	1	1	6,053,928.5	2,191,180.8	0.00	5.50	0.00	66	10.0	8.0	Y
16	2	1	6,053,945.5	2,191,109.2	0.00	5.50	0.00	66	10.0	8.0	Y
29	3	1	6,053,942.5	2,191,024.2	0.00	5.50	0.00	66	10.0	8.0	Y
30	4	1	6,053,910.5	2,190,953.8	0.00	5.50	0.00	66	10.0	8.0	Y
31	5	1	6,053,991.0	2,190,948.0	0.00	5.50	0.00	66	10.0	8.0	Y
28	6	1	6,054,007.5	2,191,020.5	0.00	5.50	0.00	66	10.0	8.0	Y
17	7	1	6,054,027.0	2,191,107.2	0.00	5.50	0.00	66	10.0	8.0	Y
14	9	1	6,053,989.5	2,191,179.2	0.00	5.50	0.00	66	10.0	8.0	Y

RBF **12 July 2011**
Malisos **TNM 2.5**

INPUT: BUILDING ROWS
PROJECT/CONTRACT: **2626 Harbor**
RUN: **7ft Wall**

Building Row			Points			
Name	Average	Building	No.	Coordinates (ground)		
	Height	Percent		X	Y	Z
	ft	%		ft	ft	ft
Building1	25.00	20	1	6,053,913.5	2,191,166.2	0.00
			2	6,053,913.5	2,191,185.5	0.00
			3	6,053,895.5	2,191,185.8	0.00
			4	6,053,895.5	2,191,166.0	0.00
			5	6,053,915.5	2,191,165.8	0.00
			6	6,053,915.5	2,191,154.5	0.00
			7	6,053,947.5	2,191,154.2	0.00
			8	6,053,947.5	2,191,178.2	0.00
			9	6,053,914.5	2,191,178.5	0.00
Building2	25.00	20	10	6,053,975.5	2,191,166.0	0.00
			11	6,053,975.5	2,191,185.0	0.00
			12	6,053,957.5	2,191,185.2	0.00
			13	6,053,957.5	2,191,165.5	0.00
			14	6,053,977.5	2,191,165.2	0.00
			15	6,053,977.5	2,191,154.0	0.00
			16	6,054,009.5	2,191,153.8	0.00
			17	6,054,009.5	2,191,177.8	0.00
			18	6,053,976.5	2,191,178.0	0.00
Building3	25.00	20	19	6,054,053.5	2,191,165.8	0.00
			20	6,054,053.5	2,191,184.5	0.00
			21	6,054,071.5	2,191,184.5	0.00
			22	6,054,071.5	2,191,164.8	0.00
			23	6,054,051.5	2,191,164.8	0.00
			24	6,054,051.5	2,191,153.5	0.00

			25	6,054,019.5	2,191,153.8	0.00
			26	6,054,019.5	2,191,177.8	0.00
			27	6,054,052.5	2,191,177.5	0.00
Building4	25.00	20	28	6,054,099.5	2,191,166.8	0.00
			29	6,054,099.5	2,191,184.2	0.00
			30	6,054,081.5	2,191,184.5	0.00
			31	6,054,081.5	2,191,164.8	0.00
			32	6,054,101.5	2,191,164.5	0.00
			33	6,054,101.5	2,191,153.2	0.00
			34	6,054,133.5	2,191,153.0	0.00
			35	6,054,133.5	2,191,177.0	0.00
			36	6,054,100.5	2,191,177.2	0.00
Building5	25.00	20	37	6,054,205.5	2,191,164.8	0.00
			38	6,054,205.5	2,191,183.5	0.00
			39	6,054,223.5	2,191,183.5	0.00
			40	6,054,223.0	2,191,163.8	0.00
			41	6,054,203.0	2,191,163.8	0.00
			42	6,054,203.0	2,191,152.5	0.00
			43	6,054,171.0	2,191,152.8	0.00
			44	6,054,171.5	2,191,176.8	0.00
			45	6,054,204.5	2,191,176.5	0.00
Building6	25.00	20	46	6,054,251.0	2,191,164.2	0.00
			47	6,054,251.5	2,191,183.2	0.00
			48	6,054,233.5	2,191,183.5	0.00
			49	6,054,233.0	2,191,163.8	0.00
			50	6,054,253.0	2,191,163.5	0.00
			51	6,054,253.0	2,191,152.2	0.00
			52	6,054,285.0	2,191,152.0	0.00
			53	6,054,285.5	2,191,176.0	0.00
			54	6,054,252.5	2,191,176.2	0.00
Building7	25.00	20	55	6,054,329.5	2,191,165.0	0.00
			56	6,054,329.5	2,191,182.8	0.00
			57	6,054,347.5	2,191,182.8	0.00
			58	6,054,347.0	2,191,163.0	0.00
			59	6,054,327.0	2,191,163.0	0.00
			60	6,054,327.0	2,191,151.8	0.00

			61	6,054,295.0	2,191,152.0	0.00
			62	6,054,295.5	2,191,176.0	0.00
			63	6,054,328.5	2,191,175.8	0.00
Building8	25.00	20	64	6,054,391.0	2,191,163.8	0.00
			65	6,054,391.5	2,191,182.2	0.00
			66	6,054,409.5	2,191,182.2	0.00
			67	6,054,409.0	2,191,162.5	0.00
			68	6,054,389.0	2,191,162.8	0.00
			69	6,054,389.0	2,191,151.5	0.00
			70	6,054,357.0	2,191,151.5	0.00
			71	6,054,357.5	2,191,175.5	0.00
			72	6,054,390.5	2,191,175.2	0.00
Building9	25.00	20	73	6,054,440.5	2,191,145.2	0.00
			74	6,054,459.0	2,191,148.0	0.00
			75	6,054,461.5	2,191,130.2	0.00
			76	6,054,442.0	2,191,127.2	0.00
			77	6,054,439.0	2,191,147.0	0.00
			78	6,054,428.0	2,191,145.5	0.00
			79	6,054,423.5	2,191,177.0	0.00
			80	6,054,447.0	2,191,180.5	0.00
			81	6,054,452.0	2,191,148.0	0.00
Building10	25.00	20	82	6,054,443.0	2,191,083.2	0.00
			83	6,054,461.5	2,191,083.0	0.00
			84	6,054,461.5	2,191,065.0	0.00
			85	6,054,441.5	2,191,065.2	0.00
			86	6,054,442.0	2,191,085.2	0.00
			87	6,054,430.5	2,191,085.2	0.00
			88	6,054,430.5	2,191,117.2	0.00
			89	6,054,454.5	2,191,117.0	0.00
			90	6,054,454.5	2,191,084.0	0.00
Building11	25.00	20	91	6,054,443.0	2,191,037.0	0.00
			92	6,054,461.5	2,191,036.8	0.00
			93	6,054,461.5	2,191,054.8	0.00
			94	6,054,441.5	2,191,055.0	0.00
			95	6,054,441.5	2,191,035.0	0.00
			96	6,054,430.5	2,191,035.0	0.00

			97	6,054,430.0	2,191,003.0	0.00
			98	6,054,454.0	2,191,003.0	0.00
			99	6,054,454.5	2,191,036.0	0.00
Building12	25.00	20	100	6,054,440.5	2,190,974.8	0.00
			101	6,054,458.0	2,190,972.0	0.00
			102	6,054,460.5	2,190,989.8	0.00
			103	6,054,441.0	2,190,992.8	0.00
			104	6,054,438.0	2,190,973.0	0.00
			105	6,054,427.0	2,190,975.0	0.00
			106	6,054,422.0	2,190,943.2	0.00
			107	6,054,445.5	2,190,939.5	0.00
			108	6,054,450.5	2,190,972.0	0.00
Building13	25.00	20	109	6,054,389.5	2,190,957.8	0.00
			110	6,054,389.5	2,190,940.5	0.00
			111	6,054,407.5	2,190,940.2	0.00
			112	6,054,407.5	2,190,960.0	0.00
			113	6,054,387.5	2,190,960.2	0.00
			114	6,054,387.5	2,190,971.5	0.00
			115	6,054,355.5	2,190,971.8	0.00
			116	6,054,355.5	2,190,947.8	0.00
			117	6,054,388.5	2,190,947.5	0.00
Building14	25.00	20	118	6,054,311.5	2,190,959.8	0.00
			119	6,054,311.0	2,190,941.5	0.00
			120	6,054,293.0	2,190,941.8	0.00
			121	6,054,293.5	2,190,961.5	0.00
			122	6,054,313.5	2,190,961.2	0.00
			123	6,054,313.5	2,190,972.5	0.00
			124	6,054,345.5	2,190,972.2	0.00
			125	6,054,345.5	2,190,948.2	0.00
			126	6,054,312.5	2,190,948.5	0.00
Building15	25.00	20	127	6,054,265.5	2,190,960.8	0.00
			128	6,054,265.0	2,190,943.2	0.00
			129	6,054,283.0	2,190,943.0	0.00
			130	6,054,283.5	2,190,962.8	0.00
			131	6,054,263.5	2,190,963.0	0.00
			132	6,054,263.5	2,190,974.2	0.00

			133	6,054,231.5	2,190,974.5	0.00
			134	6,054,231.0	2,190,950.5	0.00
			135	6,054,264.0	2,190,950.2	0.00
Building16	25.00	20	136	6,054,100.5	2,190,962.8	0.00
			137	6,054,100.0	2,190,944.2	0.00
			138	6,054,082.0	2,190,944.2	0.00
			139	6,054,082.5	2,190,964.0	0.00
			140	6,054,102.5	2,190,964.0	0.00
			141	6,054,102.5	2,190,975.2	0.00
			142	6,054,134.5	2,190,975.0	0.00
			143	6,054,134.5	2,190,951.0	0.00
			144	6,054,101.5	2,190,951.2	0.00
Building17	25.00	20	145	6,054,054.5	2,190,962.8	0.00
			146	6,054,054.0	2,190,944.5	0.00
			147	6,054,072.0	2,190,944.5	0.00
			148	6,054,072.5	2,190,964.2	0.00
			149	6,054,052.5	2,190,964.2	0.00
			150	6,054,052.5	2,190,975.5	0.00
			151	6,054,020.5	2,190,975.8	0.00
			152	6,054,020.0	2,190,951.8	0.00
			153	6,054,053.0	2,190,951.5	0.00
Building18	25.00	20	154	6,053,976.0	2,190,962.2	0.00
			155	6,053,976.0	2,190,943.8	0.00
			156	6,053,958.0	2,190,943.8	0.00
			157	6,053,958.0	2,190,963.5	0.00
			158	6,053,978.0	2,190,963.5	0.00
			159	6,053,978.0	2,190,974.8	0.00
			160	6,054,010.0	2,190,974.8	0.00
			161	6,054,010.0	2,190,950.8	0.00
			162	6,053,977.0	2,190,950.8	0.00
Building19	25.00	20	163	6,053,929.0	2,190,963.0	0.00
			164	6,053,923.0	2,190,945.8	0.00
			165	6,053,940.0	2,190,940.0	0.00
			166	6,053,946.5	2,190,958.8	0.00
			167	6,053,927.5	2,190,965.0	0.00
			168	6,053,931.0	2,190,975.8	0.00

			169	6,053,900.5	2,190,985.8	0.00
			170	6,053,893.0	2,190,963.0	0.00
			171	6,053,924.0	2,190,952.8	0.00
Building20	25.00	20	172	6,053,966.0	2,191,039.8	0.00
			173	6,053,966.0	2,191,058.0	0.00
			174	6,053,984.0	2,191,058.0	0.00
			175	6,053,984.0	2,191,038.2	0.00
			176	6,053,964.0	2,191,038.2	0.00
			177	6,053,964.0	2,191,027.0	0.00
			178	6,053,932.0	2,191,027.2	0.00
			179	6,053,932.0	2,191,051.2	0.00
			180	6,053,965.0	2,191,051.0	0.00
Building21	25.00	20	181	6,053,966.5	2,191,094.0	0.00
			182	6,053,966.0	2,191,075.2	0.00
			183	6,053,984.0	2,191,075.0	0.00
			184	6,053,984.5	2,191,094.8	0.00
			185	6,053,964.5	2,191,095.0	0.00
			186	6,053,964.5	2,191,106.2	0.00
			187	6,053,932.5	2,191,106.5	0.00
			188	6,053,932.0	2,191,082.5	0.00
			189	6,053,965.0	2,191,082.2	0.00
Building22	25.00	20	190	6,054,012.5	2,191,093.2	0.00
			191	6,054,012.0	2,191,074.8	0.00
			192	6,053,994.0	2,191,075.0	0.00
			193	6,053,994.5	2,191,094.8	0.00
			194	6,054,014.5	2,191,094.5	0.00
			195	6,054,014.5	2,191,105.8	0.00
			196	6,054,046.5	2,191,105.5	0.00
			197	6,054,046.0	2,191,081.5	0.00
			198	6,054,013.0	2,191,081.8	0.00
Building23	25.00	20	199	6,054,074.0	2,191,092.0	0.00
			200	6,054,074.0	2,191,074.5	0.00
			201	6,054,056.0	2,191,074.5	0.00
			202	6,054,056.5	2,191,094.2	0.00
			203	6,054,076.5	2,191,094.2	0.00
			204	6,054,076.5	2,191,105.5	0.00

			205	6,054,108.5	2,191,105.2	0.00
			206	6,054,108.0	2,191,081.2	0.00
			207	6,054,075.0	2,191,081.5	0.00
Building24	25.00	20	208	6,054,136.0	2,191,091.5	0.00
			209	6,054,136.0	2,191,074.0	0.00
			210	6,054,118.0	2,191,074.0	0.00
			211	6,054,118.5	2,191,093.8	0.00
			212	6,054,138.5	2,191,093.8	0.00
			213	6,054,138.5	2,191,105.0	0.00
			214	6,054,170.5	2,191,104.8	0.00
			215	6,054,170.0	2,191,080.8	0.00
			216	6,054,137.0	2,191,081.0	0.00
Building26	25.00	20	217	6,054,250.5	2,191,093.5	0.00
			218	6,054,230.5	2,191,093.5	0.00
			219	6,054,230.5	2,191,105.2	0.00
			220	6,054,198.0	2,191,105.8	0.00
			221	6,054,197.5	2,191,079.0	0.00
			222	6,054,232.0	2,191,078.8	0.00
			223	6,054,232.0	2,191,072.5	0.00
			224	6,054,250.0	2,191,072.5	0.00
			225	6,054,250.0	2,191,092.8	0.00
Building27	25.00	20	226	6,054,294.5	2,191,091.2	0.00
			227	6,054,294.0	2,191,073.0	0.00
			228	6,054,312.0	2,191,073.0	0.00
			229	6,054,312.5	2,191,092.8	0.00
			230	6,054,292.5	2,191,092.8	0.00
			231	6,054,292.5	2,191,104.0	0.00
			232	6,054,260.5	2,191,104.2	0.00
			233	6,054,260.0	2,191,080.2	0.00
			234	6,054,293.0	2,191,080.0	0.00
Building28	25.00	20	235	6,054,340.5	2,191,090.5	0.00
			236	6,054,340.0	2,191,072.8	0.00
			237	6,054,322.0	2,191,072.8	0.00
			238	6,054,322.5	2,191,092.5	0.00
			239	6,054,342.5	2,191,092.5	0.00
			240	6,054,342.5	2,191,103.8	0.00

			241	6,054,374.5	2,191,103.5	0.00
			242	6,054,374.0	2,191,079.5	0.00
			243	6,054,341.0	2,191,079.8	0.00
Building29	25.00	20	244	6,054,356.0	2,191,034.5	0.00
			245	6,054,356.0	2,191,052.5	0.00
			246	6,054,374.0	2,191,052.5	0.00
			247	6,054,374.0	2,191,032.8	0.00
			248	6,054,354.0	2,191,032.8	0.00
			249	6,054,354.0	2,191,021.5	0.00
			250	6,054,322.0	2,191,021.8	0.00
			251	6,054,322.0	2,191,045.8	0.00
			252	6,054,355.0	2,191,045.5	0.00
Building30	25.00	20	253	6,054,278.0	2,191,035.5	0.00
			254	6,054,278.0	2,191,053.2	0.00
			255	6,054,260.0	2,191,053.2	0.00
			256	6,054,260.0	2,191,033.5	0.00
			257	6,054,280.0	2,191,033.5	0.00
			258	6,054,280.0	2,191,022.2	0.00
			259	6,054,312.0	2,191,022.0	0.00
			260	6,054,312.0	2,191,046.0	0.00
			261	6,054,279.0	2,191,046.2	0.00
Building31	25.00	20	262	6,054,232.0	2,191,035.8	0.00
			263	6,054,232.0	2,191,053.5	0.00
			264	6,054,250.0	2,191,053.2	0.00
			265	6,054,250.0	2,191,033.5	0.00
			266	6,054,230.0	2,191,033.8	0.00
			267	6,054,230.0	2,191,022.5	0.00
			268	6,054,198.0	2,191,022.5	0.00
			269	6,054,198.0	2,191,046.5	0.00
			270	6,054,231.0	2,191,046.5	0.00
Building32	25.00	20	271	6,054,136.0	2,191,035.5	0.00
			272	6,054,136.0	2,191,054.0	0.00
			273	6,054,118.0	2,191,054.2	0.00
			274	6,054,118.0	2,191,034.5	0.00
			275	6,054,138.0	2,191,034.2	0.00
			276	6,054,138.0	2,191,023.0	0.00

			277	6,054,170.0	2,191,022.8	0.00
			278	6,054,170.0	2,191,046.8	0.00
			279	6,054,137.0	2,191,047.0	0.00
Building33	25.00	20	280	6,054,074.0	2,191,035.8	0.00
			281	6,054,074.0	2,191,054.5	0.00
			282	6,054,056.0	2,191,054.5	0.00
			283	6,054,056.0	2,191,034.8	0.00
			284	6,054,076.0	2,191,034.8	0.00
			285	6,054,076.0	2,191,023.5	0.00
			286	6,054,108.0	2,191,023.2	0.00
			287	6,054,108.0	2,191,047.2	0.00
			288	6,054,075.0	2,191,047.5	0.00
Building34	25.00	20	289	6,054,028.0	2,191,036.2	0.00
			290	6,054,028.0	2,191,054.8	0.00
			291	6,054,046.0	2,191,054.5	0.00
			292	6,054,046.0	2,191,034.8	0.00
			293	6,054,026.0	2,191,035.0	0.00
			294	6,054,026.0	2,191,023.8	0.00
			295	6,053,994.0	2,191,024.0	0.00
			296	6,053,994.0	2,191,048.0	0.00
			297	6,054,027.0	2,191,047.8	0.00

RBF 12 July 2011
Malisos TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 2626 Harbor
RUN: 7ft Wall

Barrier Name	Type	Height Min	Height Max	If Wall $ per Unit Area	If Berm $ per Unit Vol.	Top Width	Run:Rise	Add'tnl $ per Unit Length	Points Name	No.	Coordinates (bottom) X	Y	Z	Height at Point	Segment Seg Ht Increment	Perturbs #Up	#Dn	On Struct?	Important Reflections?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	6,053,952.5	2,191,196.5	0.00	7.00	0.00	0	0		
									point2	2	6,053,883.5	2,191,196.8	0.00	7.00	0.00	0	0		
									point3	3	6,053,883.5	2,191,146.8	0.00	7.00	0.00	0	0		
									point4	4	6,053,885.5	2,191,146.5	0.00	7.00	0.00	0	0		
									point5	5	6,053,885.0	2,191,096.5	0.00	7.00	0.00	0	0		
									point6	6	6,053,883.0	2,191,096.8	0.00	7.00	0.00	0	0		
									point7	7	6,053,882.5	2,191,047.0	0.00	7.00	0.00	0	0		
									point8	8	6,053,884.5	2,191,046.5	0.00	7.00	0.00	0	0		
									point9	9	6,053,884.0	2,190,996.8	0.00	7.00	0.00	0	0		
									point10	10	6,053,882.0	2,190,996.8	0.00	7.00	0.00	0	0		
									point11	11	6,053,881.5	2,190,958.8	0.00	7.00	0.00	0	0		
									point12	12	6,053,905.5	2,190,933.8	0.00	7.00	0.00	0	0		
									point14	14	6,053,950.5	2,190,933.8	0.00	7.00					

RBF 12 July 2011
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 2626 Harbor
RUN: No Wall
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing	No Barrier					With Barrier			
			Lden	Lden		Increase over existing		Type	Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	Lden	Calculated	Goal	Calculated
							Sub'l Inc					minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
15	1	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
16	2	1	0.0	69.6	66	69.6	10	Snd Lvl	69.6	0.0	8	-8.0
29	3	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0
30	4	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0
31	5	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
28	6	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
17	7	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
14	9	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	8	0.0	0.0	0.0
All Impacted	5	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RBF 12 July 2011
Malisos TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 2626 Harbor
RUN: 7ft Wall
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
15	1	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
16	2	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
29	3	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
30	4	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
31	5	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
28	6	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0
17	7	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
14	9	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	8	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

B. NOISE MEASUREMENT SHEETS

Site Number: 2626 Harbor Boulevard – HARB 001			
Recorded By: Brian Allee			
Job Number: 10-108158			
Date: 7/12/11			
Time: 9:55 AM			
Location: Southwest corner of project site adjacent to corner of Harbor Boulevard and Merrimac Way.			
Source of Peak Noise: Vehicular noise from Harbor Boulevard and Merrimac Way – noise from adjacent car dealerships (pedestrians talking, opening/closing of car doors, starting of vehicles) – pedestrians walking on Harbor Boulevard and Merrimac Way.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
69.5	53.0	84.9	102.7

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Brüel & Kjær	2250	2548189	9/10/2009	
	Microphone	Brüel & Kjær	4189	2543364	9/10/2009	
	Preamp	Brüel & Kjær	ZC 0032	4265	9/10/2009	
	Calibrator	Brüel & Kjær	4231	2545667	9/10/2009	

Weather Data			
Est.	Duration: 10 minutes	Sky: ☼	
	Note: dBA Offset = -0.02	Sensor Height (ft): 5 ft	
	Wind Ave Speed (mph / m/s)	Temperature (degrees Fahrenheit)	Barometer Pressure (hPa)
	0.9	77.0	1011.5

Photo of Measurement Location

DATASHEET: MEASUREMENT: SHORT-TERM: TRAFFIC

JN: 10-108158		Analyst: Brian Allee			Site #: HARBOO1
Date: 7/12/11	Day: Tuesday		Time: 9:55 AM		NOTES: Vehicles slow down and/or speed up at intersection of Harbor Blvd. and Merrimac Way.
Traffic Counts					
Street Name: Harbor Boulevard (adjacent to intersection of Merrimac Way).					
Posted Speed Limit (mph): 40			Average Speed (mph): 39		
SB			NB		
Auto	MT	HT	Auto	MT	HT
156	5	6	213	6	5

2250

Instrument:		2250
Application:		BZ7225 Version 2.0.2
Start Time:		07/12/2011 09:55:03
End Time:		07/12/2011 10:05:03
Elapsed Time:		00:10:00
Bandwidth:		1/3-octave
Max Input Level:		140.14

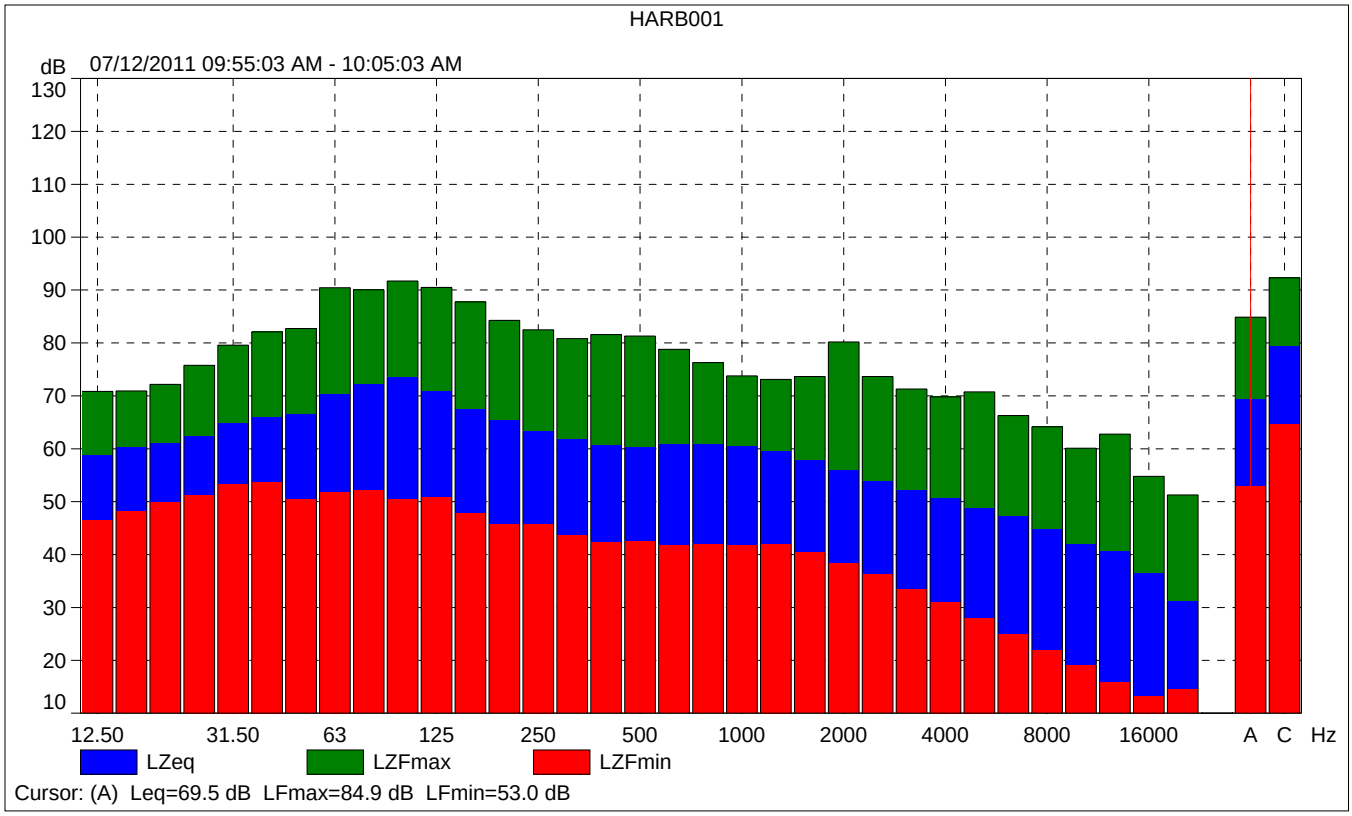
	Time	Frequency
Broadband (excl. Peak):	FSI	AC
Broadband Peak:		C
Spectrum:	FS	Z

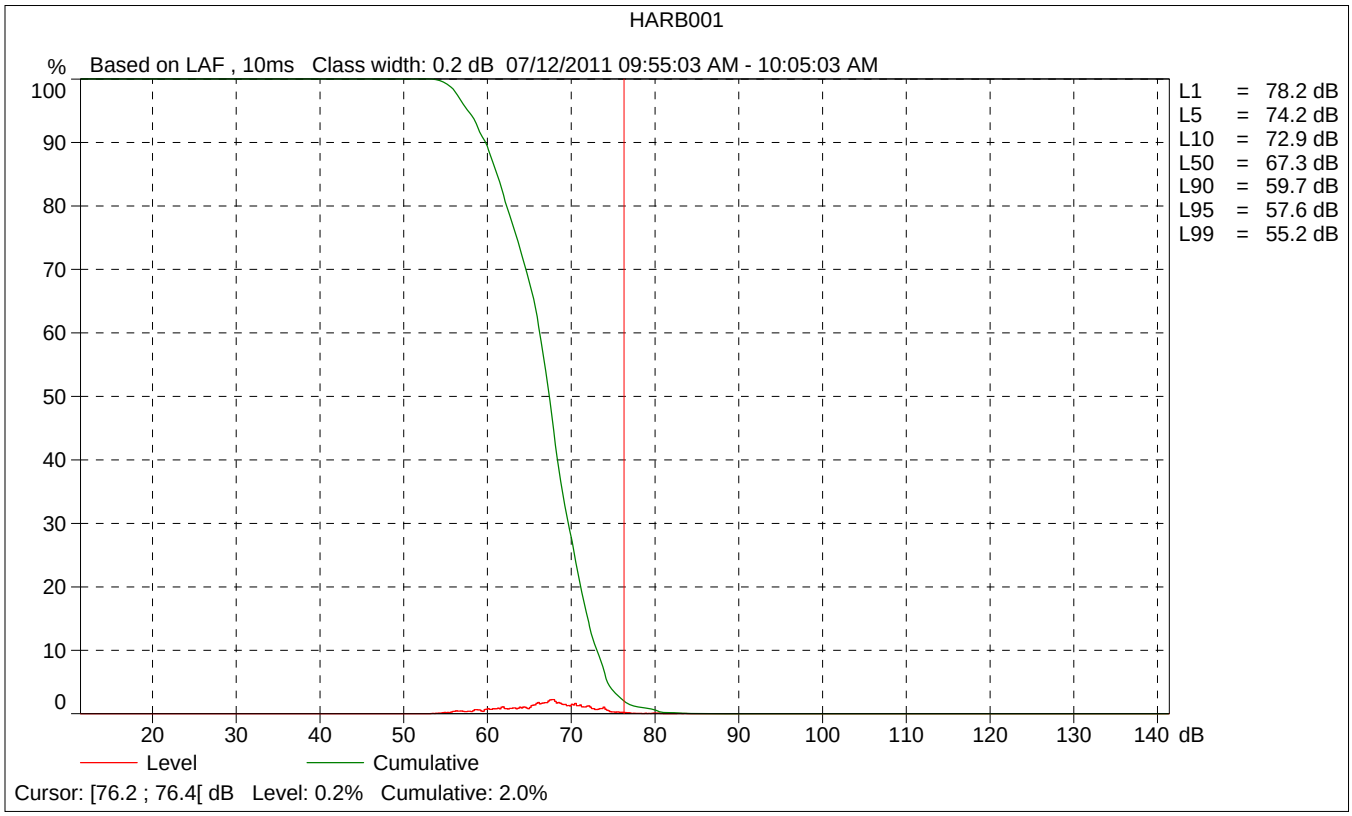
Instrument Serial Number:		2548189
Microphone Serial Number:		2543364
Input:		Top Socket
Windscreen Correction:		None
Sound Field Correction:		Diffuse-field

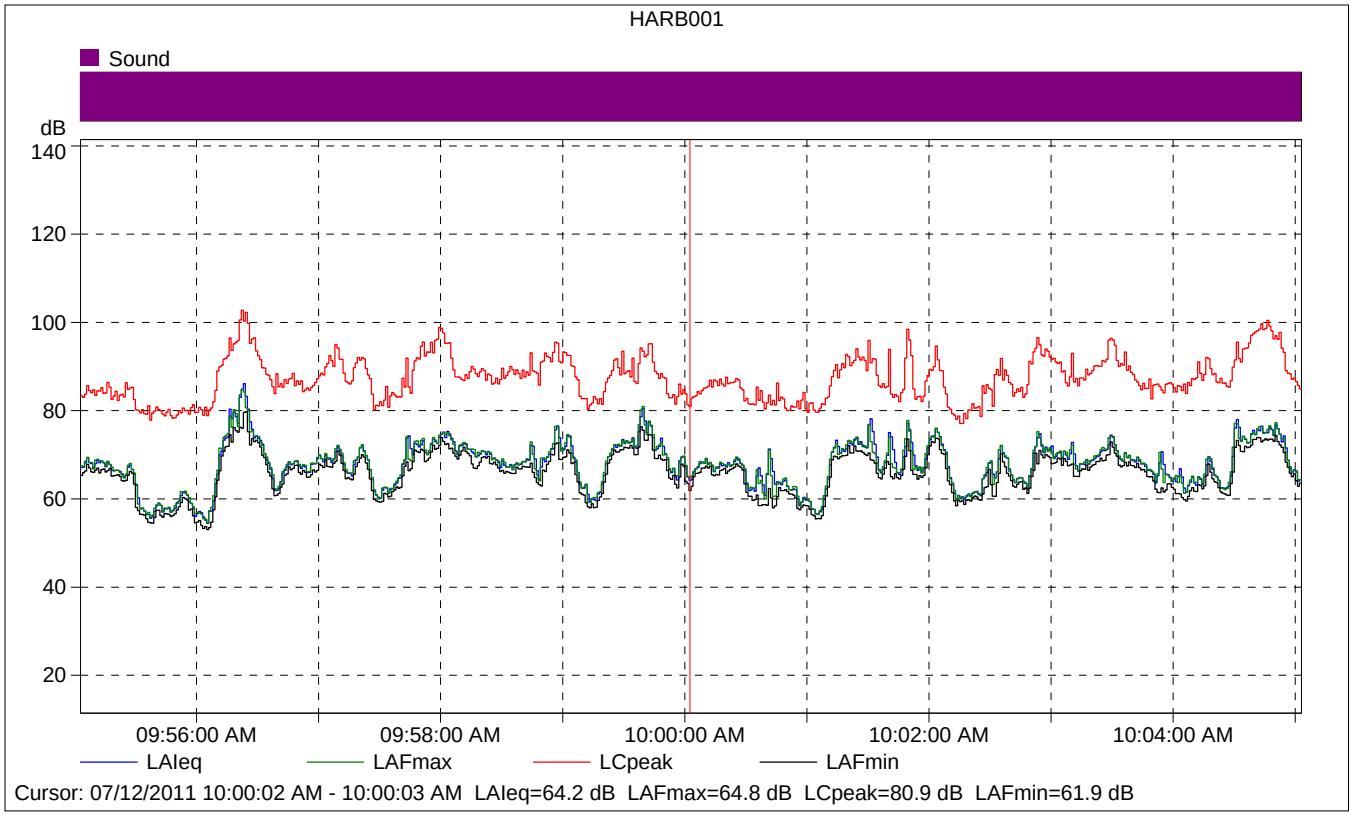
Calibration Time:		07/12/2011 09:04:37
Calibration Type:		External reference
Sensitivity:		54.80 mV/Pa

HARB001

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAFmax [dB]	LAFmin [dB]
Value				0.00	69.5	84.9	53.0
Time	09:55:03 AM	10:05:03 AM	0:10:00				
Date	07/12/2011	07/12/2011					

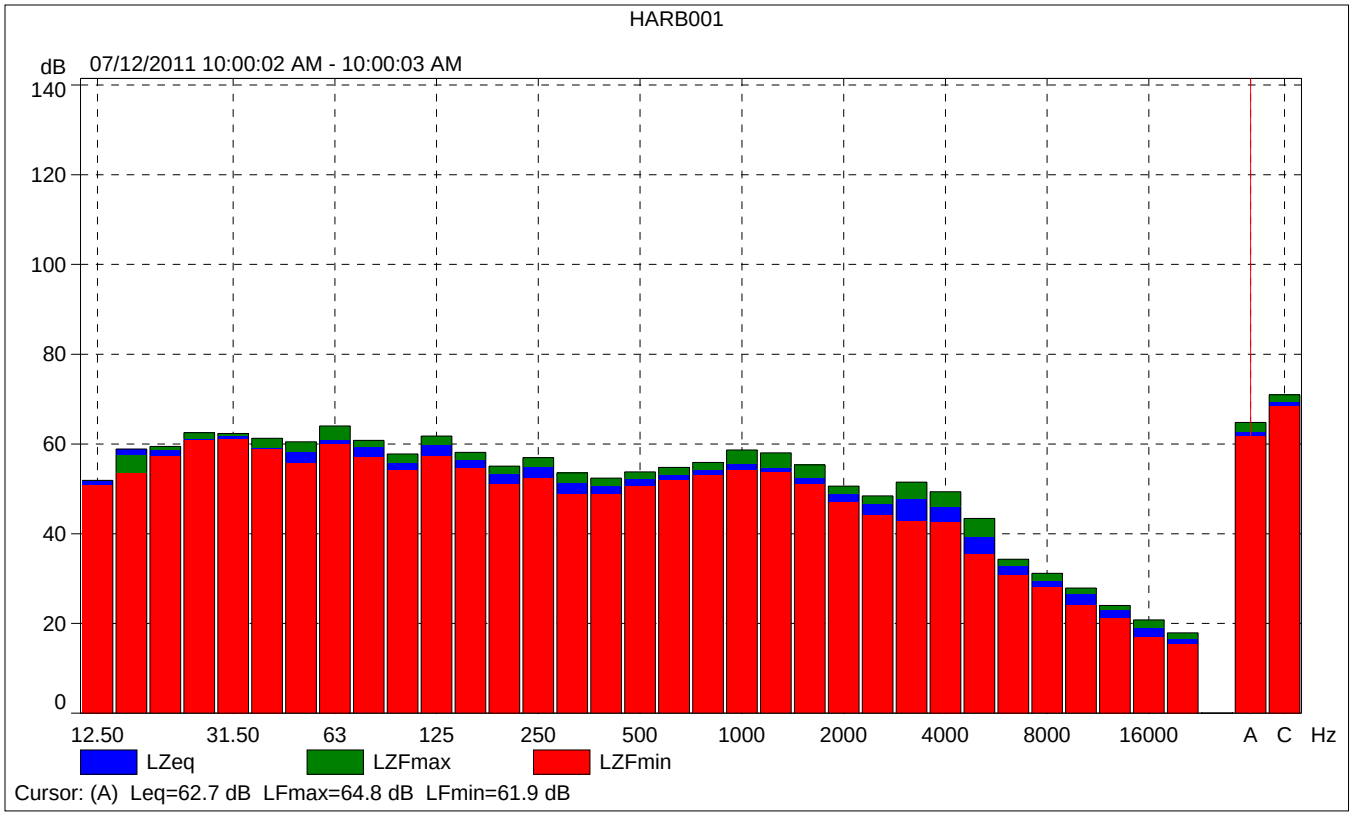

HARB001
dB
07/12/2011 09:55:03 AM - 10:05:03 AM
130
120
110
100
90
80
70
60
50
40
30
20
10
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=69.5 dB LFmax=84.9 dB LFmin=53.0 dB

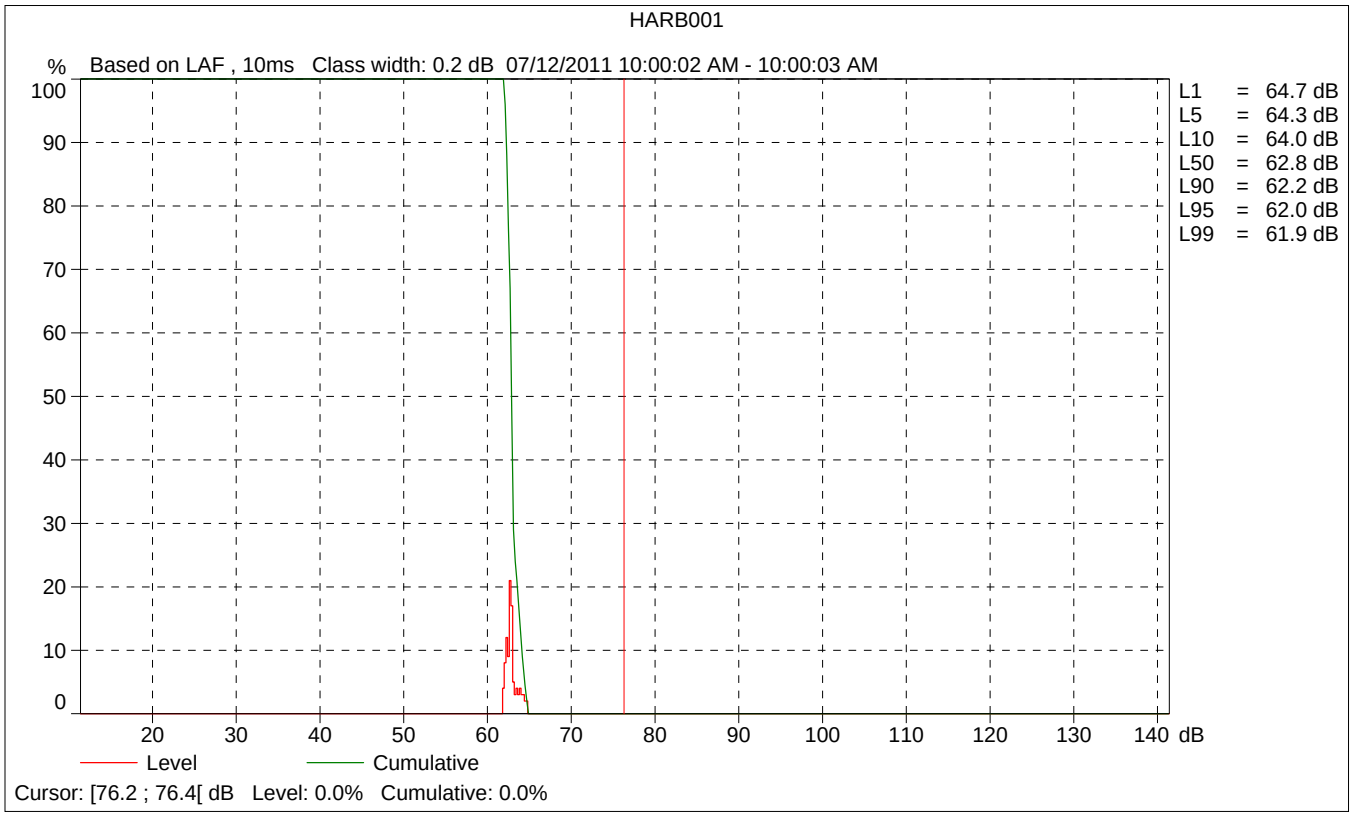

HARB001
%
Based on LAF , 10ms Class width: 0.2 dB 07/12/2011 09:55:03 AM - 10:05:03 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 78.2 dB
L5 = 74.2 dB
L10 = 72.9 dB
L50 = 67.3 dB
L90 = 59.7 dB
L95 = 57.6 dB
L99 = 55.2 dB
Level
Cumulative
Cursor: [76.2 ; 76.4[dB Level: 0.2% Cumulative: 2.0%

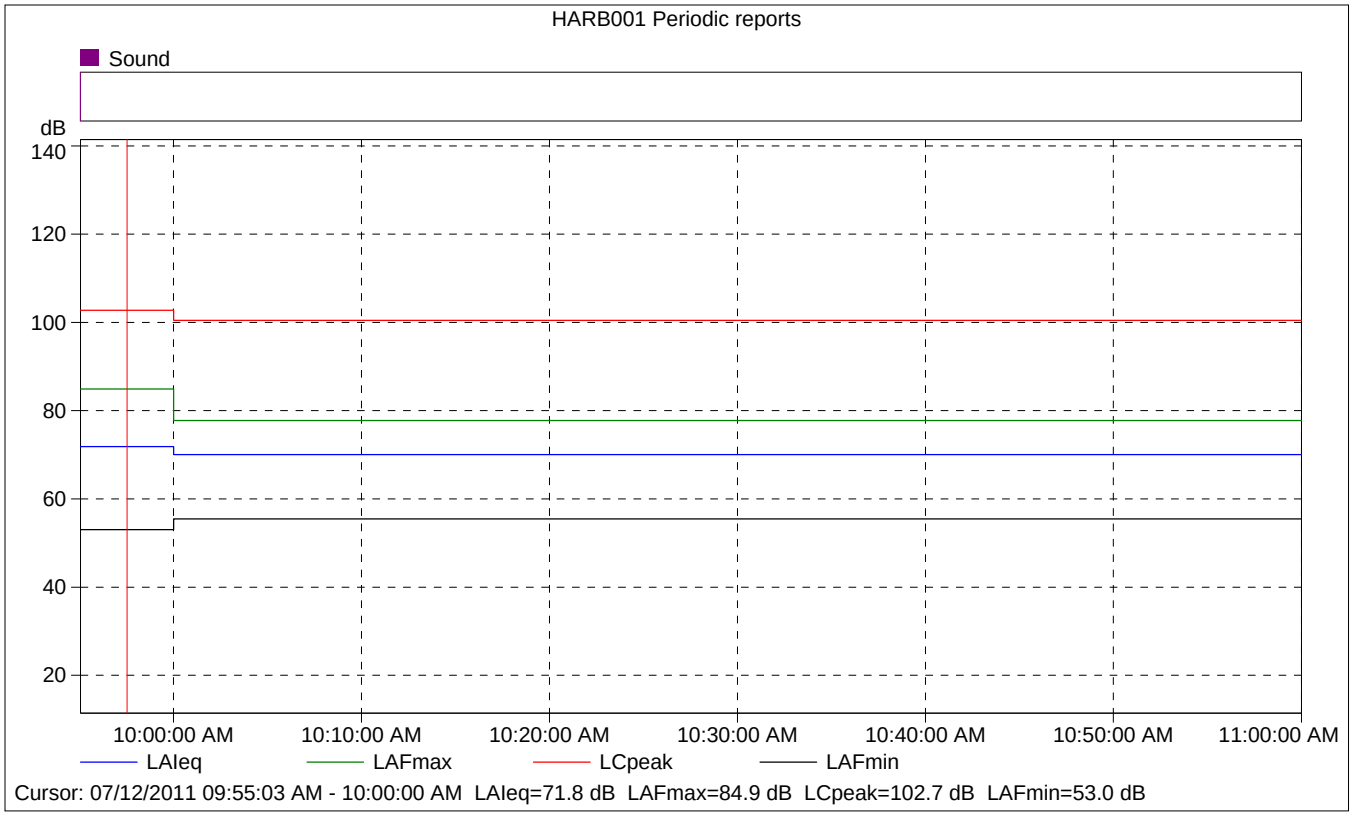


HARB001

	Start time	Elapsed time	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			64.2	64.8	61.9
Time	10:00:02 AM	0:00:01			
Date	07/12/2011				

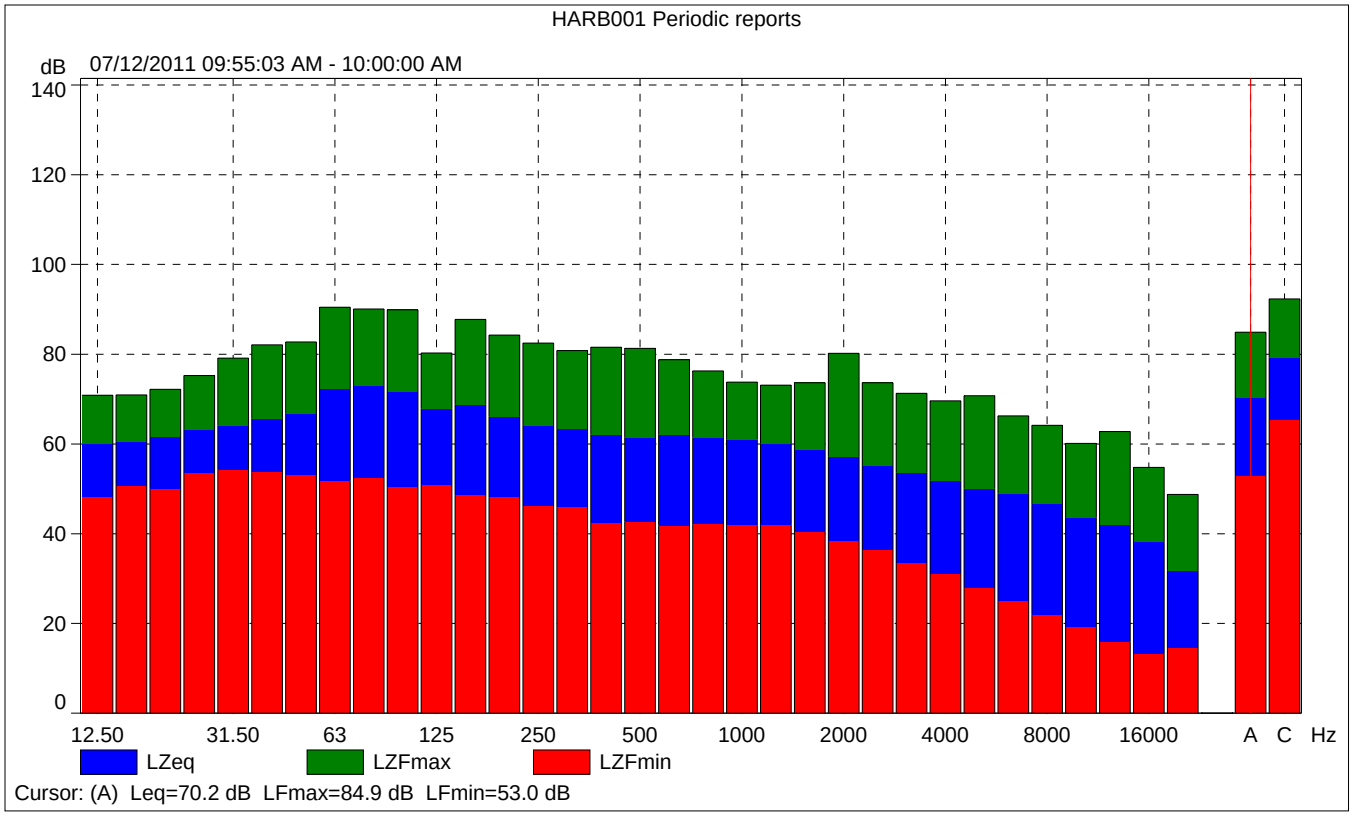

HARB001
dB
07/12/2011 10:00:02 AM - 10:00:03 AM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=62.7 dB LFmax=64.8 dB LFmin=61.9 dB

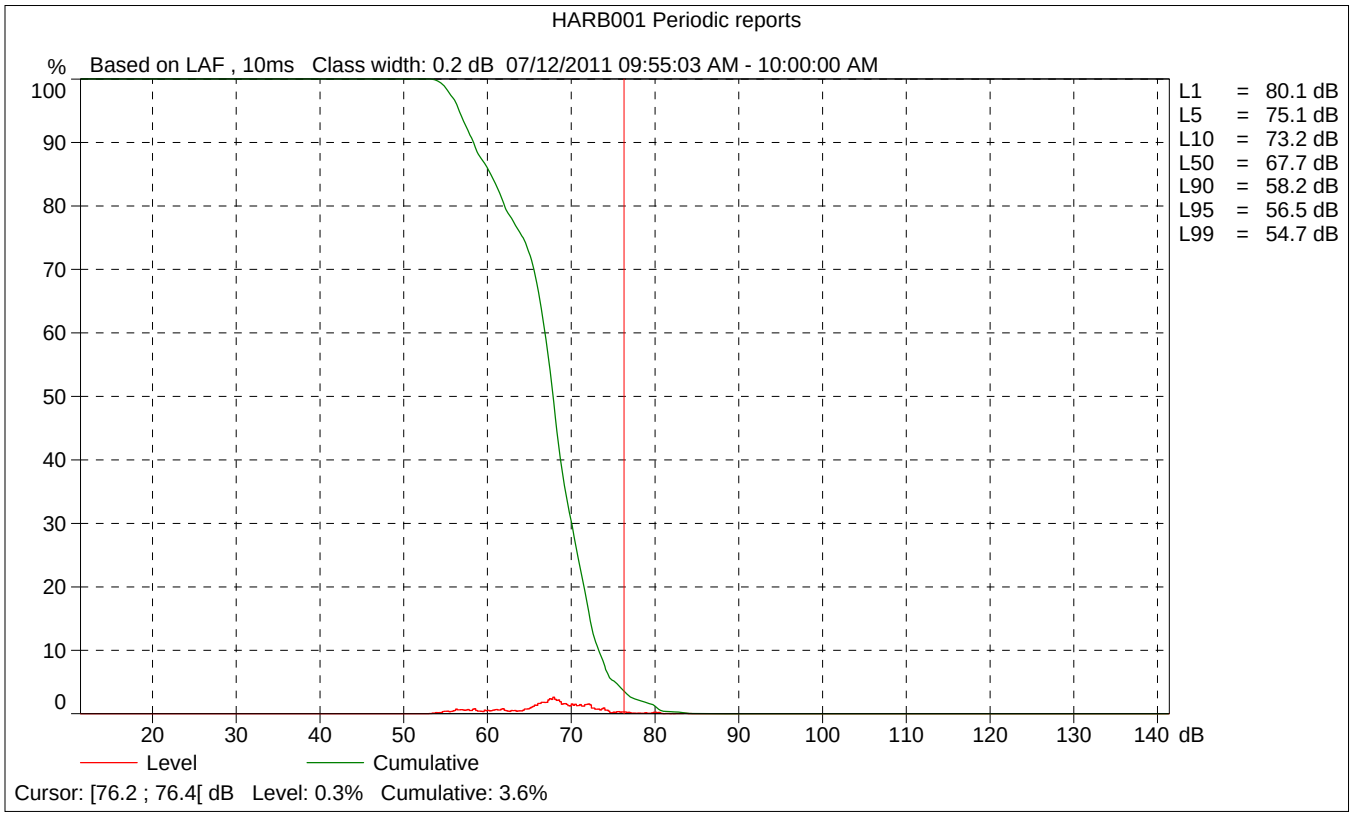

HARB001
%
Based on LAF , 10ms Class width: 0.2 dB 07/12/2011 10:00:02 AM - 10:00:03 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 64.7 dB
L5 = 64.3 dB
L10 = 64.0 dB
L50 = 62.8 dB
L90 = 62.2 dB
L95 = 62.0 dB
L99 = 61.9 dB
Level
Cumulative
Cursor: [76.2 ; 76.4[dB Level: 0.0% Cumulative: 0.0%

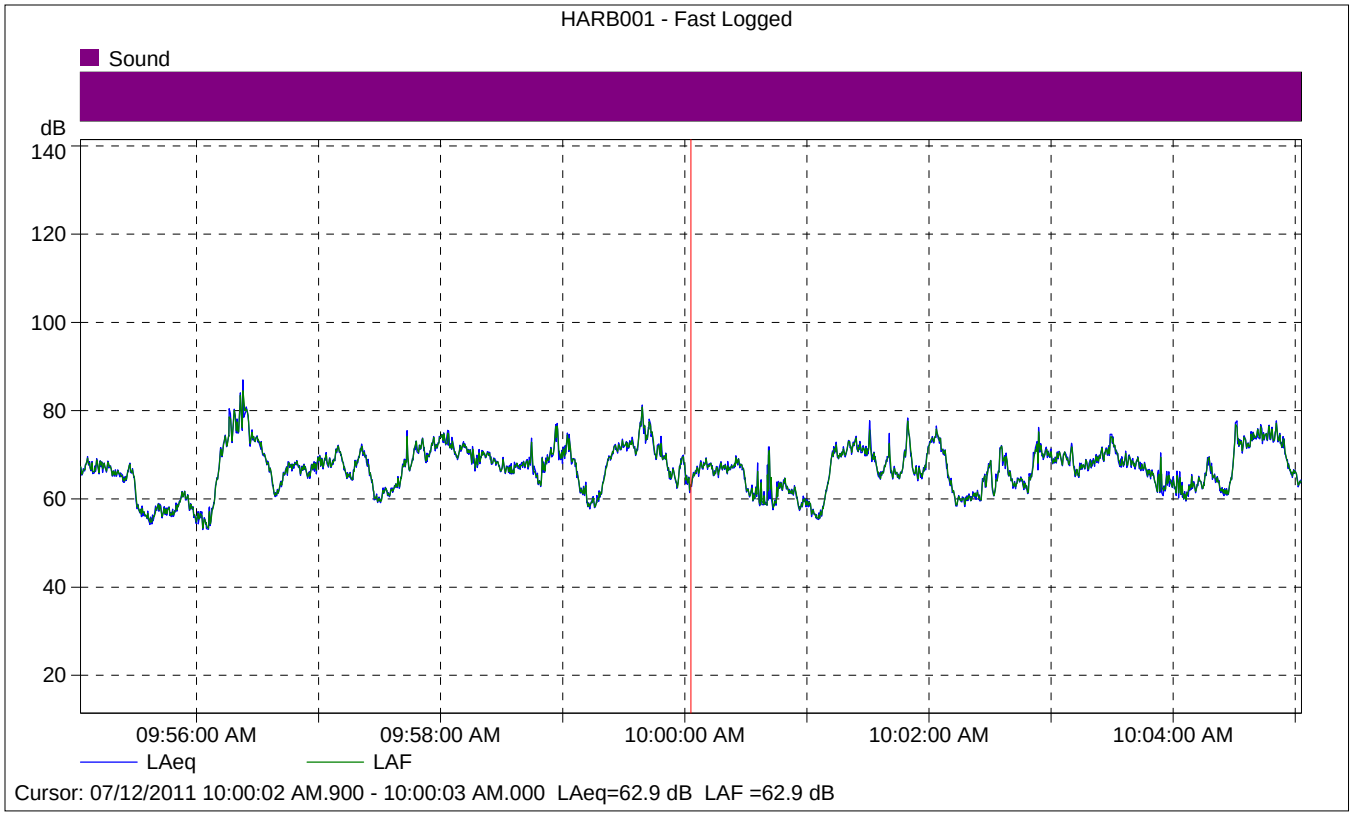


HARB001 Periodic reports

	Start time	Elapsed time	Overload [%]	LAIeq [dB]	LAFmax [dB]	LAFmin [dB]
Value			0.00	71.8	84.9	53.0
Time	09:55:03 AM	0:04:57				
Date	07/12/2011					


HARB001 Periodic reports
dB
07/12/2011 09:55:03 AM - 10:00:00 AM
140
120
100
80
60
40
20
0
12.50
31.50
63
125
250
500
1000
2000
4000
8000
16000
A
C
Hz
LZeq
LZFmax
LZFmin
Cursor: (A) Leq=70.2 dB LFmax=84.9 dB LFmin=53.0 dB


HARB001 Periodic reports
%
Based on LAF , 10ms Class width: 0.2 dB 07/12/2011 09:55:03 AM - 10:00:00 AM
100
90
80
70
60
50
40
30
20
10
0
20
30
40
50
60
70
80
90
100
110
120
130
140
dB
L1 = 80.1 dB
L5 = 75.1 dB
L10 = 73.2 dB
L50 = 67.7 dB
L90 = 58.2 dB
L95 = 56.5 dB
L99 = 54.7 dB
Level
Cumulative
Cursor: [76.2 ; 76.4[dB Level: 0.3% Cumulative: 3.6%



HARB001 - Fast Logged

	Start time	Elapsed time	LAeq [dB]
Value			62.9
Time	10:00:02 AM.900	0:00:00.100	
Date	07/12/2011		