Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

Mapleview

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1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR) was retained by Mapleview to prepare an environmental noise and vibration assessment for the proposed development near Killaly Street West and West Side Road in Port Colborne, Ontario ("the Project site"). This report is in support of a planning application including Local Official Plan Amendment (OPA), Draft Plan of Subdivision (DPOS), and Zoning By-Law Amendment (ZBA) for the proposed development.

1.1 Focus of Report

In keeping with the Ministry of Environment, Conservation and Parks (MECP) and Niagara Region requirements, in addition to the City of Port Colborne 'Noise Impact and Vibration Study Terms of Reference', this report examines the potential for:

- Impacts of the environment on the proposed development;
- Impacts of the proposed development on the environment; and
- Impacts of the proposed development on itself.

Mechanical systems associated with the development (e.g., cooling and ventilation equipment) have not been sufficiently designed at this stage and can be assessed at a future date, if required. A general discussion has been included in this report to address impacts of the proposed development on the environment and on itself.

1.2 Nature of the Surroundings

The Project site is surrounded by the following:

- Killaly Street West to the north, with detached residential dwellings, hotels/commercial businesses and Main Street West (Regional Road 3) beyond;
- Open space, the Portal Village Retirement Community, and neighbourhood commercial/retail businesses to the east;
- The GIO Rail Trillium Railways (TRRY) Harbour Spur rail line with detached residential dwellings beyond to the south; and
- Open space, environmentally protected space, and rural residential dwellings to the west.

The Project site is currently generally zoned Residential (R1 – First Density Residential, R2 – Second Density Residential and R4 – Fourth Density Residential), along with some Public and Park (P) space. The surrounding area is predominantly zoned Residential (R1), Neighbourhood Commercial (NC), Highway Commercial (HC) at the northwest, and Institutional (I) to the east.

A context plan is shown in **Figure 1**.

1.3 Description of Proposed Development

The Project site is located south of Killaly Street West at Humberstone Con 1 Pt Lots 31 to 33 Pt Rd. The lands containing the Project site are currently undeveloped and vacant land.

The proposed development is to include the following buildings quantities and types:

- Eight (8) mid-rise residential and mixed-use residential buildings along Killaly Street West (8-storeys in height);

- Thirteen (13) blocks of stacked townhouses (3-storeys in height);
- Sixty-one (61) blocks of regular townhouses (3-storeys in height);
- Fifteen (15) blocks of back-to-back townhouses (3-storeys in height);
- Six (6) blocks of rear-lane townhouses (3-storeys in height); and
- Ninety-six (96) single family dwelling lots (2-storeys in height).

Development drawings with building IDs are provided for reference in **Appendix A**. Unique IDs for the single-family dwelling lots have been added by SLR for descriptive purposes, also shown in **Appendix A**.

SLR understands that the stacked townhouses, back-to-back townhouses, and rear-lane townhouses will have elevated rooftop terraces more than 4 m in depth. Regular townhouses and single-family dwellings will have rear yard amenity spaces. The mid-rise buildings along Killaly Street West will have a common elevated terrace atop a parking structure connected to Buildings 03 and 04 (refer to **Appendix A**), and there will be an at-grade outdoor amenity area near the northwest corner of the Project site, southwest of Building 01. At-grade parking lots will be located at the northern portion of the Project site, south of the mid-rise buildings along Killaly Street West.

Access to the proposed development will be via Killaly Street West from the north, and via Elgin Street West from the west.

PART 1: IMPACTS OF THE ENVIRONMENT ON THE DEVELOPMENT

In evaluating potential impacts of the environment on the proposed development, the focus of this report is assessment of:

- Transportation noise from surrounding roadways/railways;
- Stationary noise from surrounding industries/facilities on the development; and,
- Transportation vibration from surrounding railways.

The proposed development is not located in proximity to any airports; therefore, an assessment of aircraft noise is not required.

2.0 Transportation Noise Assessment

2.1 Transportation Noise Sources

Transportation sources of interest with the potential to produce road and rail noise at the proposed development include:

- Road noise - Killaly Street West, West Side Road, Main Street West (Regional Road 3); and
- Rail noise – the GIO Rail TRRY Harbour Spur.

Road and rail traffic sound levels from these sources have been predicted, and this information has been used to identify façade, ventilation, and warning clause recommendations and/or requirements for the proposed development. Road traffic noise from other nearby roadways is

expected to be acoustically insignificant relative to those noted above, and has not been assessed further.

2.2 Surface Transportation Noise Criteria

2.2.1 Ministry of Environment Publication NPC-300

Noise-Sensitive Development

Ministry of the Environment, Conservation and Parks (MECP) Publication NPC-300 provides sound level criteria for noise-sensitive developments. The applicable portions of NPC-300 are Part C – Land Use Planning and the associated definitions outlined in Part A – Background. **Tables 1** to **4** summarize the applicable surface transportation (road and rail) criteria.

Location-Specific Criteria

Table 1 summarizes criteria in terms of energy equivalent sound levels (L_{eq}) for specific noise-sensitive locations. Both outdoor and indoor locations are identified, with the focus of outdoor areas being amenity spaces. Indoor criteria vary with sensitivity of the space. As a result, Sleeping Quarters have more stringent criteria than Living/Dining room spaces.

Table 1: NPC-300 Sound Level Criteria for Road and Rail Noise

Type of Space	Time Period	Energy Equivalent Sound Level L_{eq} [5] (dBA)		Assessment Location
		Road	Rail [1]	
Outdoor Amenity Area	Daytime (0700-2300h)	55	55	Outdoors [2]
Living/Dining Room [3]	Daytime (0700-2300h)	45	40	Indoors [4]
	Nighttime (2300-0700h)	45	40	Indoors [4]
Sleeping Quarters	Daytime (0700-2300h)	45	40	Indoors [4]
	Nighttime (2300-0700h)	40	35	Indoors [4]

Notes: [1] Whistle noise is excluded for OLA noise assessments and included for Living/Dining Room and Sleeping Quarter assessments, where applicable.

[2] Road and Rail noise impacts are to be combined for assessment of OLA impacts.

[3] Residence area Dens, Hospitals, Nursing Homes, Schools, Daycares are also included. During the nighttime period, Schools and Daycares are excluded.

[4] An assessment of indoor noise levels is required only if the criteria in **Table 4** are exceeded.

[5] L_{eq} – the energy equivalent sound level, integrated over the time period shown.

Outdoor Living Areas

Table 2 summarizes the noise mitigation requirements for communal outdoor amenity areas ("Outdoor Living Areas" or "OLAs").

For the assessment of outdoor sound levels, total surface transportation noise is determined by combining road and rail traffic sound levels. Whistle noise from trains is not included in the determination of outdoor sound levels.

Table 2: NPC-300 OLA Sound Level Criteria for Road and Rail Noise

Time Period	OLA Energy Equivalent Sound Level L_{eq} (dBA)	Mitigation Requirements/Warning Clause Recommendations
Daytime (0700-2300h)	≤ 55	• None
	56 to 60 inc.	• Noise barrier OR Type A Warning Clause
	> 60	• Noise barrier to reduce noise to 55 dBA OR • Noise barrier to reduce noise to 60 dBA and Type B Warning Clause

Ventilation and Warning Clauses

Table 3 summarizes recommendations for ventilation where windows would potentially have to remain closed as a means of noise control. Despite implementation of ventilation measures where recommended, if sound levels exceed the guideline limits in **Table 1**, warning clauses advising future occupants of the potential excesses are also recommended. Warning clauses also apply to OLAs.

Table 3: NPC-300 Ventilation and Warning Clause Recommendations

Assessment Location	Time Period	Energy Equivalent Sound Level – L_{eq} (dBA)		Ventilation and Warning Clause Recommendations [2]
		Road	Rail [1]	
Outdoor Living Area	Daytime (0700-2300h)	56 to 60 incl.		Type A Warning Clause
Plane of Window	Daytime (0700-2300h)	≤ 55		None
		56 to 65 incl.		Forced Air Heating with provision to add air conditioning + Type C Warning Clause
		> 65		Central Air Conditioning + Type D Warning Clause
	Nighttime (2300-0700h)	51 to 60 incl.		Forced Air Heating with provision to add air conditioning + Type C Warning Clause
		> 60		Central Air Conditioning + Type D Warning Clause

Notes: [1] Whistle noise is excluded from assessment.
[2] Road and Rail noise is combined for determining ventilation and warning clause recommendations.

Building Component Requirements

Table 4 provides sound level thresholds which, if exceeded, trigger a requirement for the building shell components (i.e., exterior walls, windows) to be designed accordingly to meet the applicable indoor sound criteria.

Table 4: NPC-300 Building Component Assessment Requirements

Assessment Location	Time Period	Energy Equivalent Sound Level – L_{eq} (dBA)		Component Requirements
		Road	Rail [1]	
Plane of Window	Daytime (0700-2300h)	> 65	> 60	Designed/ Selected to Meet Indoor Requirements [2]
	Nighttime (2300-0700h)	> 60	> 55	

Notes: [1] Whistle noise is included in assessment.
[2] Building component requirements are assessed separately for Road and Rail, and then combined for a resultant sound isolation parameter.

2.3 Traffic Data and Future Projections

2.3.1 Road Traffic Data

Turning movement counts (TMCs) from December 2022 were obtained from the project transportation consultant, Trans-Plan, for the intersections of Main Street/Killaly Street West, Killaly Street West/Third Avenue, and Killaly Street West/West Side Road. Niagara Region Transportation Services Division was contacted for traffic data for the intersections of Killaly Street West/Main Street and Killaly Street West/West Side Road. Data was not available for the former, and data from the latter was from 2005. Therefore, the recently collected TMCs were deemed the most appropriate data set for road traffic noise assessment.

The peak hour TMCs were used to calculate the AADT volumes and commercial vehicle (truck) percentages for Killaly Street West, Main Street, and West Side Road. The peak-hour TMCs resulting in the highest AADT volumes were applied in the assessment. Average commercial vehicle percentages between AM and PM peak hours were calculated and used. The percentage split between medium and heavy trucks was assumed based on a typical distribution for municipal highways. Year 2022 traffic volumes were projected to future year 2044 (20-year future projection minimum as required by Niagara Region, representing a mature state of development), based on a 2% annual growth rate obtained from the project transportation consultant. Daytime/nighttime splits of 90%/10% were applied for all the roadways, based on default MECP distributions in the ORNAMENT document.

Table 5: Summary of Road Traffic Data Used in Transportation Analysis

Roadway Link	Traffic Volumes AADT [1]	% Day/Night Volume Split		Commercial Vehicle Breakdown		Vehicle Speed (km/hr)
		Daytime	Nighttime	% Medium Trucks	% Heavy Trucks	
Killaly Street West	11,440	90	10	2.1	3.4	60
Main Street (RR3)	10,095	90	10	3.7	5.9	60
West Side Road	8,611	90	10	1.0	1.7	50

Notes: [1] Based on peak hour TMC data noted in **Section 2.3.1**. Base year data was projected to year 2044 using an annual growth rate of 2%.

Copies of road traffic data and calculations are provided for reference in **Appendix B**. **Table 5** summarizes the road traffic data used in the analysis.

2.3.2 Rail Traffic Data

SLR understands that the rail line is infrequently used for GIO Rail cars, which may be stored on the spur line tracks. This description aligns with observations by SLR staff during site visits conducted in May 2023 and October 2023.

Rail traffic data for year 2023 was obtained directly from GIO Rail, and correspondence is included for reference in **Appendix B**. To be conservative in the assessment, it was assumed one (1) train could arrive during either daytime or nighttime hours (i.e., two (2) total trains per day). These rail traffic volumes from 2023 were projected to future year 2036 at a growth rate of 2.5%. This growth rate is commonly applied in rail transportation noise assessments.

The rail traffic data used in the assessment is summarized in **Table 6**, with modelling inputs included for reference in **Appendix B**.

Table 6: Summary of Rail Traffic Data Used in Transportation Analysis

Railway Source	Train Type	Max. Locomotives per Train	Max. Cars per Train	Forecasted Train Volumes		Train Speed (km/hr)
				Daytime	Nighttime	
GIO Rail Harbour Spur Line	Freight (Diesel)	1	60	2	2	16

2.4 Predicted Sound Levels

Future road traffic sound levels at the proposed development were predicted using Cadna/A, a commercially available noise propagation modelling software package. Roadways were modelled as line sources of sound, with sound emission rates calculated using the ORNAMENT algorithms, the road traffic noise model of the MECP. These predictions were validated and are equivalent to those made using the MECP's ORNAMENT or STAMSON v5.04 road traffic noise models. A STAMSON validation file and output are included for reference in **Appendix C**.

Sound levels were predicted along the facades of the proposed development using the "building evaluation" feature of Cadna/A. This feature allows for sound levels to be predicted across the entire façade of a structure. OLA sound levels were assessed at a height of 1.5 m above ground level, 3 m from the building facades, or 1.5 m above the roof for terraces. For single family dwellings, building massing has not been developed; therefore, SLR developed preliminary building massing representing potential 2-storey homes to estimate façade and OLA sound levels.

Topographic contours representing the Project site and surrounding topography were obtained from the Ontario Geohub and used in the assessment (1.0 m resolution).

Global ground absorption was considered to be reflective (G = 0.0). Screening from surrounding buildings was not considered in the analysis. Both assumptions are expected to result in a conservative transportation noise assessment, as the surrounding area would have some absorptive ground, and surrounding buildings may provide screening from nearby roadways (e.g., Main Street West to the northwest).

2.4.1 Façade Sound Levels

Predicted worst-case façade sound levels due to transportation sources for each different building type are presented in **Table 7**. A complete summary of façade sound levels for all buildings in the proposed development is provided in **Appendix D**.

The transportation façade sound levels on the proposed development, showing the ranges of predicted daytime and nighttime sound levels are shown in **Figure 2a** through **Figure 2d** (daytime) and **Figure 3a** through **Figure 3d** (nighttime).

Table 7: Summary of Predicted Worst-Case Transportation Façade Sound Levels

Building	Maximum Predicted Road Sound Levels		Maximum Predicted Rail Sound Levels		Total Maximum Predicted Road + Rail Sound Levels[1]	
	L_{eq} Daytime (dBA)	L_{eq} Nighttime (dBA)	L_{eq} Daytime (dBA)	L_{eq} Nighttime (dBA)	L_{eq} Daytime (dBA)	L_{eq} Nighttime (dBA)
Building 01	68	62	32	35	68	62
Building 02	68	61	33	36	68	61
Building 03	67	61	33	36	67	61
Building 04	67	61	33	36	67	61
Building 05	67	60	34	37	67	60
Building 06	67	60	34	37	67	60
Building 07	67	60	33	36	67	60
Building 08	60	53	36	39	60	53
Back-to-Back Townhouses	53	46	39	42	53	47
Regular Townhouses	54	47	45	48	54	48
Rear-Lane Townhouses	46	40	44	47	46	47
Stacked Townhouses	54	47	34	37	54	48
Single Family Dwellings	52	45	48	51	52	51

Notes: [1] Total (road + rail) building façade sound levels are shown in **Figure 2a** through **Figure 2d** (daytime) and **Figure 3a** through **Figure 3d** (nighttime)

Sound levels due to road noise were predicted to exceed 65 dBA during daytime and 60 dBA during the nighttime at Buildings 01 through Building 07. Therefore, an assessment of building components for these Buildings is required. Refer to **Section 2.5.1**.

2.4.2 Outdoor Living Area Sound Levels

The Outdoor Living Areas (OLAs) for the proposed development include the following:

- stacked townhouses – rooftop elevated terraces;
- back-to-back townhouses – rooftop elevated terraces;
- rear-lane townhouses – rooftop elevated terraces

- regular townhouses – rear yard amenity spaces;
- single-family dwellings – rear yard amenity spaces;
- common at-grade OLA at northwest portion of proposed development; and
- elevated common amenity terrace atop a parking structure connected to Buildings 03 and 04.

Select worst-case OLAs representative of the different building types were assessed, as shown in **Figure 4**. Predicted OLA sound levels at these locations are presented in **Table 8** and are also shown in **Figure 4**.

Table 8: Summary of Predicted Transportation Outdoor Living Area Sound Levels

OLA Assessment Location	Predicted Road Sound Level L_{eq} Daytime (dBA)	Predicted Rail Sound Level L_{eq} Daytime (dBA)	Predicted Roal + Rail Sound Level L_{eq} Daytime (dBA)
OLA 01	59	29	59
OLA Building 03-04	54	25	54
OLA R01	49	22	49
OLA R04	47	23	47
OLA R05	43	23	43
OLA R08	42	23	42
OLA R12	52	23	52
OLA R13	51	24	51
OLA R16	52	24	52
OLA R17	52	24	52
OLA R21	53	30	53
OLA R60	48	44	50
OLA S01	50	30	50
OLA S03	49	29	50
OLA S05	51	31	51
OLA S06	51	30	51
OLA S08	50	32	50
OLA S11	49	34	49
OLA S13	51	35	51
OLA SF34	37	48	48
OLA SF40	31	48	48
OLA SF43	37	48	48
OLA SF67	51	27	51
OLA SF70	50	41	50

OLA Assessment Location	Predicted Road Sound Level L_{eq} Daytime (dBA)	Predicted Rail Sound Level L_{eq} Daytime (dBA)	Predicted Roal + Rail Sound Level L_{eq} Daytime (dBA)
OLA SF72	43	45	48
OLA SF79	31	46	46
OLA SF87	31	47	47
OLA SF96	36	47	47

The predicted sound levels at all locations except for OLA 01 are below 55 dBA. Therefore, physical mitigation measures are not needed, but warning clauses are recommended. Refer to **Section 2.5.2**.

2.5 Noise Control Measures

2.5.1 Façade Assessment

2.5.1.1 Building Components

An assessment of indoor noise levels is required because façade sound levels due to road traffic exceed 65 dBA during the daytime at Buildings 01 through 07, and 60 dBA during the nighttime at Buildings 01 through 04.

Indoor sound levels and required facade Sound Transmission Classes (STCs) were estimated using the procedures outlined in National Research Council (NRC) Building Practice Note 56 (BPN-56). Detailed floor plans and elevation drawings were not available at the time of the assessment. The preliminary façade requirements analysis is therefore based on the following assumptions.

- Non-glazing portions of the exterior walls are assumed to have a rating of STC 45 (i.e., representing a spandrel panel construction);
- For living/dining rooms, 70% of the exterior facade is vision glass/patio doors and rooms have intermediate absorption; and
- For bedrooms, 70% of the exterior wall is vision glass and rooms have intermediate absorption.

The building façade requirements based on the transportation façade sound levels and assumptions listed above are outlined in **Table 9**.

Table 9: Summary of Façade Glazing Requirements for Proposed Development

Building	Non-Glazing Components[1]	Glazing STC Requirements[1]			
		Living/Dining Room	Bedroom	Corner Living/ Dining Room	Corner Bedroom
Building 01	45	OBC	OBC	OBC	32
Building 02	45	OBC	OBC	OBC	32
Building 03	45	OBC	OBC	OBC	31
Building 04	45	OBC	OBC	OBC	31
Building 05	45	OBC	OBC	OBC	31

Building	Non-Glazing Components[1]	Glazing STC Requirements[1]			
		Living/Dining Room	Bedroom	Corner Living/ Dining Room	Corner Bedroom
Building 06	45	OBC	OBC	OBC	31
Building 07	45	OBC	OBC	OBC	31
Notes: [1] OBC = meeting the minimum non-acoustical requirements of the Ontario Building Code, with a rating of STC 29 for windows and STC 45 for exterior walls.					

Where upgraded glazing is required, the combined glazing and frame assembly must be constructed to ensure the overall sound isolation performance of the entire window unit meets the specified STC rating. It is recommended that the window manufacturer's test data be reviewed to confirm the required acoustical performance is achieved.

For all other buildings associated with the proposed development, exterior wall and window construction meeting the minimum non-acoustics requirements of the Ontario Building Code (OBC) are predicted to be sufficient to meet the indoor noise guidelines of the MECP.

The building façade requirements should be reviewed by an acoustical consultant when detailed suite layouts and elevations are available.

2.5.1.2 Ventilation and Warning Clause Recommendations

The sound level triggers for warning clauses are summarized in **Table 3**. Where recommended, the warning clauses should be included in agreements registered on Title for the residential units and included in all agreements of purchase and sale or lease and all rental agreements.

Based on the predicted façade sound levels, an MECP Type D warning clause and central air conditioning are recommended for the following locations:

- Building 01 to Building 07 (inclusive).

Furthermore, based on the predicted façade sound levels, an MECP Type C warning clause and forced air heating with provision to add air conditioning at a later date are recommended for the following locations:

- Single Family Dwellings – Lots SF34 to SF43; and
- Building 08.

At all other locations, predicted sound levels were sufficiently low such that no ventilation recommendations are applicable.

Ventilation and warning clause recommendations are summarized in **Appendix E**.

2.5.2 Outdoor Living Area Assessment

2.5.2.1 Warning Clause Recommendations

The predicted OLA sound levels at OLA 01 exceeds 55 dBA but is below 60 dBA; therefore, an MECP Type A warning clause is recommended for Building 01 and Building 02.

OLA noise control measures or warning clauses are not recommended at any other locations in the proposed development.

3.0 Stationary Source Noise Assessment

3.1 Site Visit and Observations

Site visits to the Project site and surrounding area were completed by SLR personnel on May 5, 2023, October 11, 2023 and October 20, 2023. During the site visits, SLR made observations to identify nearby facilities with the potential for stationary source noise impacts at the proposed development. The site was found to be primarily surrounded by residential land uses, and no stationary sources were audible at the Project site.

3.2 MECP D-Series Guidelines Review

3.2.1 D-Series of Guidelines

The City of Port Colborne Terms of Reference outlines that a noise study is required when a proposed development is within the potential zone of influence of a stationary source as defined the MECP D-Series guidelines.

The D-series of guidelines were developed by the MECP in 1995 as a means to assess recommended separation distances and other control measures for land use planning proposals in an effort to prevent or minimize ‘adverse effects’ from the encroachment of incompatible land uses where a facility either exists or is proposed. D-series guidelines address sources including sewage treatment (Guideline D-2), gas and oil pipelines (Guideline D3), landfills (Guideline D-4), water services (Guideline D-5) and industries (Guideline D-6).

For this project, the applicable guideline is Guideline D-6 - Compatibility between Industrial Facilities and Sensitive Land Uses. The guideline specifically addresses issues of air quality, odour, dust, noise and litter.

Adverse effect is a term defined in the Environmental Protection Act and “means one or more of:

- impairment of the quality of the natural environment for any use that can be made of it,
- injury or damage to property or to plant or animal life,
- harm or material discomfort to any person,
- an adverse effect on the health of any person,
- impairment of the safety of any person,
- rendering any property or plant or animal life unfit for human use,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business”.

To minimize the potential to cause an adverse effect, areas of influence and recommended minimum setback distances are included within the guidelines. The areas of influence and recommended separation distances from the guidelines are provided in **Table 10**.

Table 10: Guideline D-6 – Potential Influence Area and Recommended Minimum Setback Distances for Industrial Land Uses

Industry Classification	Area of Influence	Recommended Minimum Setback Distance (m)
Class I – Light Industrial	70 m	20 m
Class II – Medium Industrial	300 m	70 m
Class III – Heavy Industrial	1000 m	300 m

Guideline D-6 also recommends that no sensitive land use be placed within the Recommended Minimum Separation Distance. However, it should be noted that this is a recommendation only. Section 4.10 of the Guideline allows for development within the separation distance, in cases of redevelopment, infilling, and transitions to mixed-use, provided that the appropriate studies are conducted and that the relevant air quality and noise guidelines are met.

3.2.2 D-6 Review for Proposed Development

The D-6 compatibility guideline setback distances related to the proposed development are shown in **Figure 5**.

The lands surrounding the Project are residential to the north, east and south. No existing Class I, Class II or Class III industries were identified within 70 m, 300 m or 1000 m area of influence setback distances from the Project site without significantly closer existing noise-sensitive receptors/ residences.

Therefore, existing stationary source noise is not of concern at the proposed development, and a detailed assessment was not completed.

3.3 Proposed Nearby Stationary Sources

SLR understands that a gas station/convenience store (with drive thru)/car wash has been proposed for 676 Main Street West, northwest of the proposed development.

Based on correspondence with the Niagara Region Development Planning Growth Strategy and Economic Development department, the property is going though the Site Plan Approval (SPA) application process. A noise study has not been completed as of October 2023.

The proposed facility at 676 Main Street West is required to meet applicable noise guideline limits at the adjacent residence, 421 Killaly Street West, and at the Good Night Hotel (665 Main Street West). As the facility will be required to meet applicable guideline limits at these locations, it will also meet applicable limits at the northwest portion of the proposed development. Therefore, it has not been considered further in this study.

4.0 Environmental Vibration Assessment

4.1 Industrial (Stationary) Sources

Based on the site visits completed by SLR staff (May 5, 2023, October 11, 2023 and October 20, 2023) and review of other land uses in the surrounding area, there are no existing or proposed industrial vibration sources in proximity to the proposed development. A detailed industrial vibration assessment was therefore not completed, and industrial vibration is not of concern for the proposed development.

4.2 Transportation Sources

4.2.1 Transportation Vibration Guidelines

There is no specific MECP guideline with respect to railway vibration for land use approvals. Both CN and Metrolinx/GO Transit have published their own criteria, and both require that vibration impact assessments be conducted to ensure that adverse vibration impacts do not occur. The Federation of Canadian Municipalities and the Railway Association of Canada (FCM/RAC) document entitled “Guidelines for New Development in Proximity to Railway Operations” is also applicable for rail vibration and used as a reference tool of best practices for rail-adjacent development. Both CN and Metrolinx/GO endorse the FCM/RAC guidelines, which require the following:

- Ground-borne vibration transmission to be evaluated in a report through site testing to determine if dwellings within 75 metres of the railway rights-of-way will be impacted by vibration conditions exceeding 0.14 mm/sec Root Mean Square (RMS) between 4 Hz and 200 Hz.
- The monitoring system should be capable of measuring frequencies between 4 Hz and 200 Hz, ± 3 dB with an RMS averaging time constant of 1 second.
- If determined to be in excess, vibration isolation measures will be required to ensure vibration levels in living areas do not exceed 0.14 mm/sec RMS at residential units within the development.

The above-noted guidelines have been applied in this assessment.

4.2.2 Transportation Vibration Sources

The GIO Rail Harbour Spur is a rail transportation source of vibration located south of the proposed development. Ground-borne vibration due to rail traffic along this spur line is the focus of this assessment.

FCM/RAC guidelines indicate a recommended 75 m minimum vibration influence area from a railway corridor. Single family dwelling lots located along the southern portion of the Project site are located within this setback distance. The closest lots at the southeast portion of the Project Site are located approximately 42 m from the tracks. Therefore, a vibration assessment was warranted, and measurements were completed as discussed in the following section.

4.2.3 Vibration Measurement Program

Measurements of ground-induced vibration due to rail traffic along the GIO Rail Harbour Spur were made at the Project site. Measurements were conducted between October 11, 2023 and October 20, 2023. Measurements were performed at two (2) locations laterally across the Project site, to capture variability in ground borne vibration propagation characteristics. The setback distances were selected to correspond as closely as possible with the nearest possible setbacks of single-family dwellings along the southern portion of the Project site. Typically, it is recommended that five (5) pass by events be measured as part of a measurement program.

The vibration measurement locations (Location 1 – east, and Location 2 – west) are shown in **Figure 6**.

Vibration velocity amplitudes were collected using Sigicom C22 monitoring units, and a trail cam was used to obtain confirmatory photographs of rail movements along the Harbour Spur during the monitoring period. The vibration monitors were set to trigger when the peak vibration levels exceeded 0.10 mm/s (peak particle velocity, PPV). The geophone signals are sampled at 4096 Hz. When the preset trigger level is exceeded a time history is recorded. The frequency range is 1 Hz to 500 Hz, and the geophones have a calibrated sensitivity within +/- 2%.

Following the measurement program, the data and trail cam photographs were reviewed and post-processed to compute RMS velocity using a 1-second integration time.

4.2.4 Vibration Measurement Results

Two (2) train pass-by events were identified during the approximate 10-day measurement program, based on a review of vibration measurements and trail cam photographs. The results of the measurements are summarized in **Table 11**.

Table 11: Summary of Measured Vibration Levels – October 11 to October 20, 2023

Train Reference	Date	Time	RMS Vibration Level (mm/s)[1]		Criteria (mm/s)	Meets Guideline Limits? (Y/N)
			Location 1	Location 2		
1	October 15, 2023	2:15 PM	---[2]	---[2]	0.14	Y
2	October 20, 2023	10:23 AM	0.012	---[2]	0.14	Y

Note: [1] Presented vibration levels are root-mean-square vibration velocity.
[2] The Sigicom vibration monitor did not trigger as vibration levels were sufficiently low during the pass-by event; therefore, the criteria were met.

As shown in **Table 11**, the first rail pass-by event did not trigger the Sigicom vibration monitors; therefore, vibration levels were well below the applicable criteria. The second rail pass-by event only triggered on the 'east' monitor (Location 1), located closer to the rail tracks; this vibration level was also well below applicable criteria. Therefore, ground borne vibration induced by rail traffic movements is not of concern at the proposed development.

4.2.5 Supplementary Vibration Analysis Methods

Activity along the GIO Rail Harbour Spur Line is current sporadic, and it was not possible to capture five (5) pass-by events via measurements vibration impacts on the proposed development within a reasonable timeframe.

To supplement the measurement program, vibration levels from rail movements were also estimated using equations from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018), specifically applied for freight locomotive operation. The FTA equations take into consideration factors such as the train travel speed, vehicle parameters, track conditions/treatments/configuration effects, ground-borne propagation effects, and receiver effects. As outlined in the FTA Manual, these estimates are expected to be conservative.

Estimated vibration levels were compared to the criteria noted in **Section 4.2.1** for the nearest potential lot location relative to the GIO Rail Harbour Spur tracks, at a distance setback of 42 m. Vibration levels in VdB were converted to RMS vibration levels in mm/s for comparison with applicable criteria.

The estimated vibration level at this setback distance is approximately 0.03 mm/s, which is well below the applicable criteria of 0.14 mm/s. A sample calculation is provided for reference in **Appendix F**.

Therefore, based on a combination of measurements and estimates using the FTA equations, ground borne vibration induced by rail traffic movements is not of concern at the proposed development.

PART 2: IMPACTS OF THE DEVELOPMENT ON ITSELF

5.0 Stationary Source Noise from the Development on Itself

At the time of this assessment, mechanical systems for the proposed development have not been sufficiently designed to complete a detailed assessment of stationary source noise from the development on itself.

For common mechanical systems that will be implemented as part of the proposed development mid-rise buildings, sound levels from all noise-generating equipment should comply with the guideline limits in MECP Publication NPC-300. The potential noise from mechanical equipment in the proposed development (such as from make-up air units, cooling towers, parking garage exhaust fans, emergency generators, etc.) should be assessed as part of the final building design. The applicable criteria can be met at all on-site receptors through appropriate selection of mechanical equipment, by locating equipment with sufficient setback from noise sensitive locations, and by incorporating control measures (e.g., silencers) into the design. This can be confirmed either later in the site plan approval process, or at the building permit approval stages.

It is recommended that the mechanical systems be reviewed by an acoustical consultant prior to final equipment selection.

If individual air conditioning systems are to be implemented for individual residential units within the proposed development, the sound levels from each unit should meet the requirements of MECP Publication NPC-216.

PART 3: IMPACTS OF THE DEVELOPMENT ON THE SURROUNDING AREA

6.0 Stationary Source Noise from the Development on the Surroundings

With respect to the acoustic environment of the area, it is expected that the proposed development will have a negligible effect on neighbouring noise-sensitive properties.

Traffic related to the proposed development will be small relative to the existing traffic volumes within the area and is not of concern with respect to potential transportation noise.

Other sources associated within the proposed development with the potential to generate noise are mechanical equipment (e.g., air conditioning units, make up air units, cooling units, and parking garage exhaust fans). Sound levels due to operation of these sources should meet MECP Publication NPC-300 noise guidelines at all off-site noise sensitive receptors.

Off-site sound levels are not expected to be of concern are not anticipated because systems will be designed to ensure that the applicable noise guidelines are met at on-site receptors.

Regardless, off-site sound levels from mechanical equipment should be assessed as part of the final building designs. The applicable criteria can be met at all surrounding receptors though the use of routine mitigation measures, including the appropriate selection of mechanical equipment, by locating equipment with sufficient setback from noise sensitive locations, and by incorporating control measures (e.g., silencers, barriers) into the designs.

It is recommended that the mechanical systems be reviewed by an acoustical consultant prior to final selection of equipment.

If individual air conditioning systems are to be implemented for individual residential units within the proposed development, the sound levels from each unit should meet the requirements of MECP Publication NPC-216.

7.0 Conclusions and Recommendations

The potential for noise impacts on and from the proposed development have been assessed. Impacts of the environment on the development, the development on itself, and the development on the surrounding area have been considered. Based on the results of this assessment, the following conclusions have been reached:

Transportation Noise

- An assessment of transportation sound levels from surrounding road and rail sources has been completed.
- Based on transportation façade sound levels, upgraded glazing is required for corner bedrooms as outlined in **Section 2.5.1.1** (Buildings 01 to 07). For all other locations, exterior wall and window construction meeting the minimum non-acoustical requirements of the OBC are predicted to be sufficient to meet MECP indoor noise guidelines.
- Ventilation and warning clause recommendations are outlined in **Section 2.5.1.2**.
- As outlined in **Section 2.5.2.1**, transportation sound levels at OLA 01 are below 60 dBA but exceed 55 dBA. Therefore, a Type A warning clause is recommended for Buildings 01 and 02.
    - At all other locations, OLA sound levels are below 55 dBA, so physical mitigation measures and warning clauses are not required.
- Warning clauses should be included in agreements registered on Title for the residential units and included in agreements of purchase and sale/rental agreements.
    - Warning clause recommendations are summarized in **Appendix E**.

Stationary Source Noise

- A review of the surrounding stationary noise sources was completed by SLR personnel during site visits to the area and through available aerial photography. Noise from stationary sources was not audible above background sound levels at the Project site during the site visit.
- Stationary source noise is not of concern at the proposed development.

Industrial and Transportation Vibration

- No significant industrial vibration sources were identified within the surrounding area. Therefore, vibration impacts from industrial sources are not of concern.
- The proposed development is located adjacent to the GIO Rail Harbour Spur.
- Rail vibration measurements were performed by SLR between October 11, 2023 and October 20, 2023. As rail traffic volumes are low and sporadic, in addition to two (2) identified pass-by events, supplementary calculations were completed using FTA methods.
    - Vibration levels due to rail traffic are below applicable criteria, and no mitigation is required, as outlined in **Section 4.2.4** and **Section 4.2.5**.

Overall Assessment

- Noise from the environment on the proposed development can be adequately controlled with upgraded glazing and with the inclusion of ventilation and warning clause recommendations as detailed in **Part 1** of this report.
- Noise from the proposed development on itself is not expected to be of concern and can be adequately controlled by following the design guidance outlined in **Part 2** of this report.
- Noise from the proposed development on the surroundings is expected to meet the applicable guideline limits and can be adequately controlled by following the design guidance outlined in **Part 3** of this report.
- As the mechanical systems for the proposed development have not been designed in detail, the acoustical design should be reviewed by an acoustical consultant during site plan approval process, or as part of the final building design.

Regards,

SLR Consulting (Canada) Ltd.

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1 electronic copy – SLR Consulting (Canada) Ltd.

8.0 References

International Organization for Standardization, ISO 9613-2: Acoustics – Attenuation of Sound During Propagation Outdoors Part 2: General Method of Calculation, Geneva, Switzerland, 1996.

Ontario Ministry of the Environment, Conservation and Parks, 1989, Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT).

Ontario Ministry of the Environment, Conservation and Parks, Publication NPC-300: Environmental Noise Guideline, Stationery and Transportation Sources – Approval and Planning, 2013.

Ontario Ministry of the Environment, Conservation and Park, STAMSON v5.04: Road, Rail and Rapid Transit Noise Prediction, 1996.

Ontario Ministry of the Environment and Energy, Publication NPC-216: Residential Air Conditioning Devices, 1993.

The Federation of Canadian Municipalities and the Railway Association of Canada, Guidelines for New Development in Proximity to Railway Operations, May 2013.

U.S. Department of Transportation, Federal Transit Administration (FTA, 2018), Transit Noise and Vibration Impact Assessment Manual, September 2018.

Figures

Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

Mapleview

SLR Project No.: 241.V13413.00001

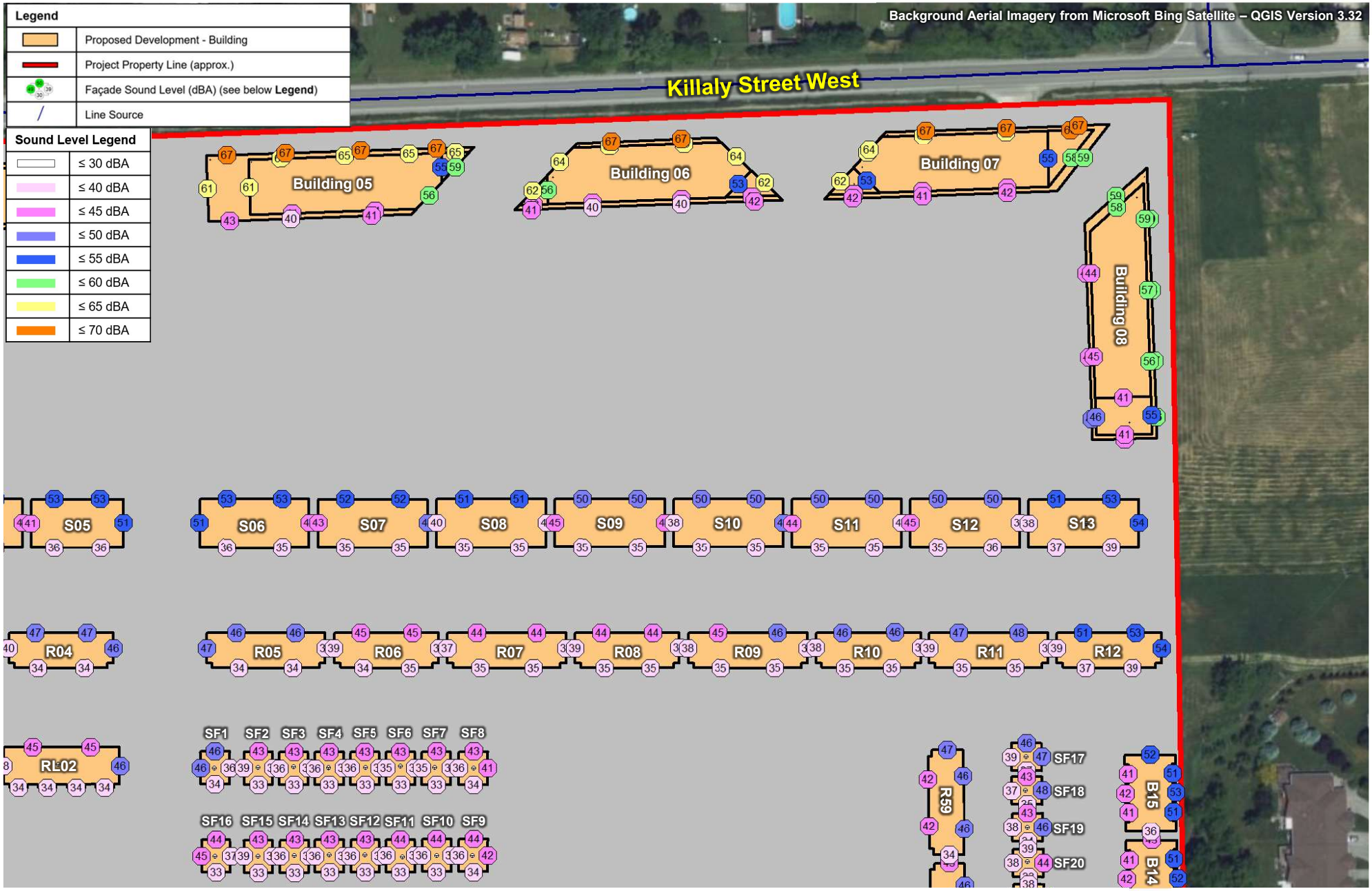
November 30, 2023

MAPLEVIEW	True North	Scale: 1:10,000	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **1**
CONTEXT PLAN		Project No. 241.V13413.00001	

SLR

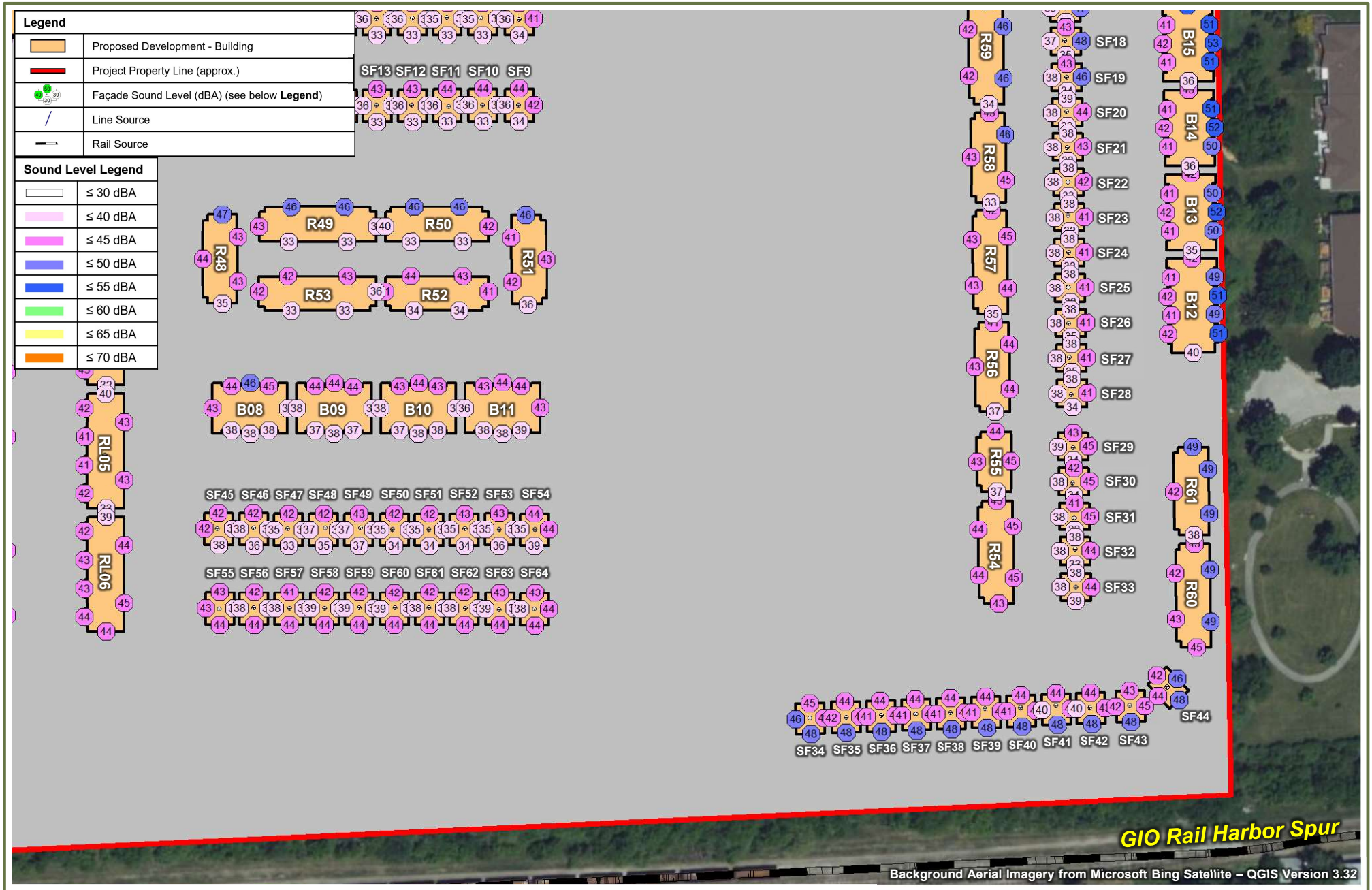
MAPLEVIEW	True North	Scale: 1:1,750	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **2a**
PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – DAYTIME NORTHWEST		Project No. 241.V13413.00001	

SLR

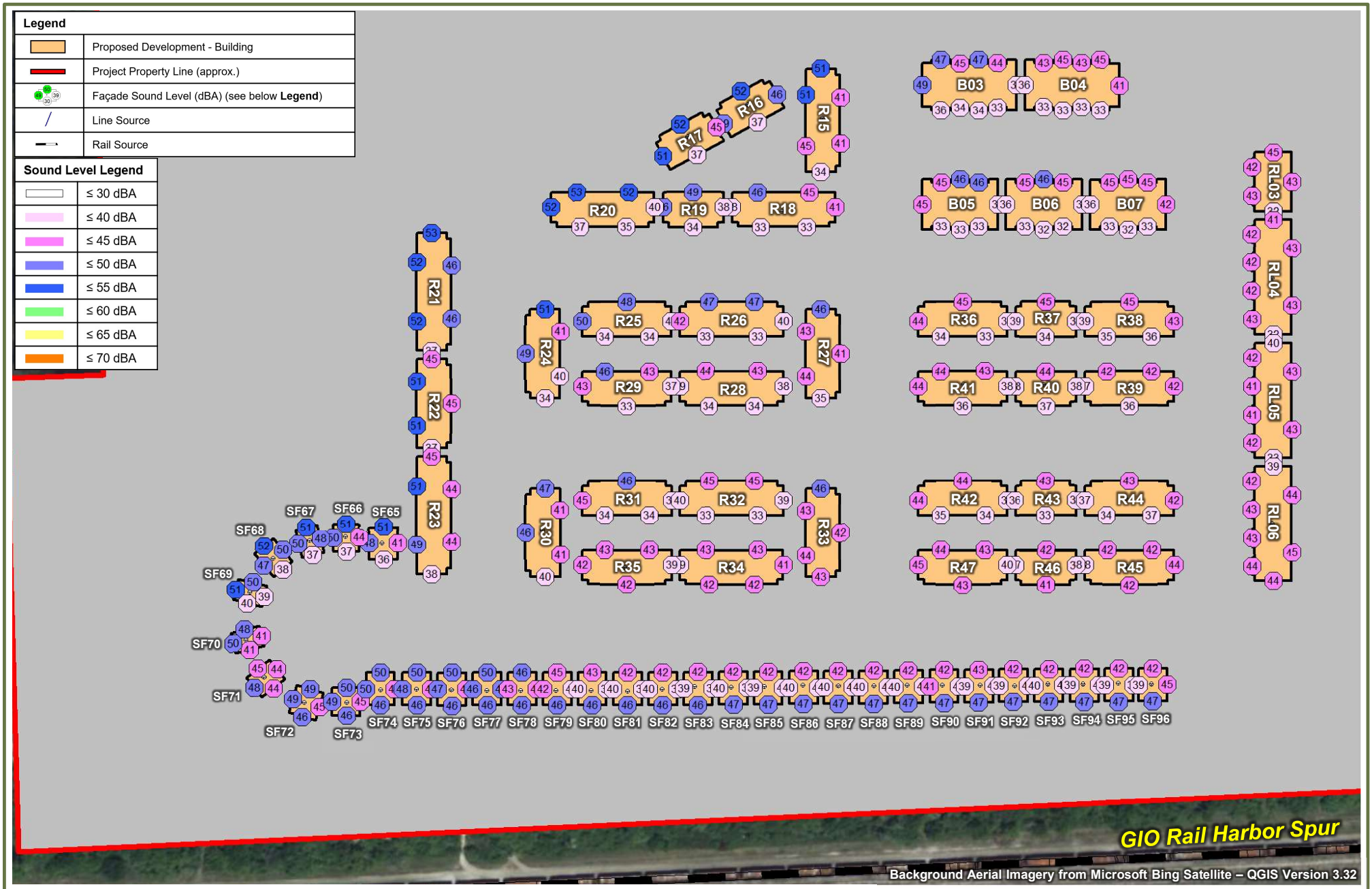


MAPLEVIEW	True North	Scale: 1:1,750	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **2b**
PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – DAYTIME NORTHEAST		Project No. 241.V13413.00001	

SLR



MAPLEVIEW	True North	Scale: 1:1,750	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **2c**
PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – DAYTIME SOUTHEAST		Project No. 241.V13413.00001	



MAPLEVIEW

KILLALY STREET WEST, PORT COLBORNE

PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – DAYTIME
SOUTHWEST

True North

Scale: 1:1,750

METRES

Date: Nov. 29, 2023

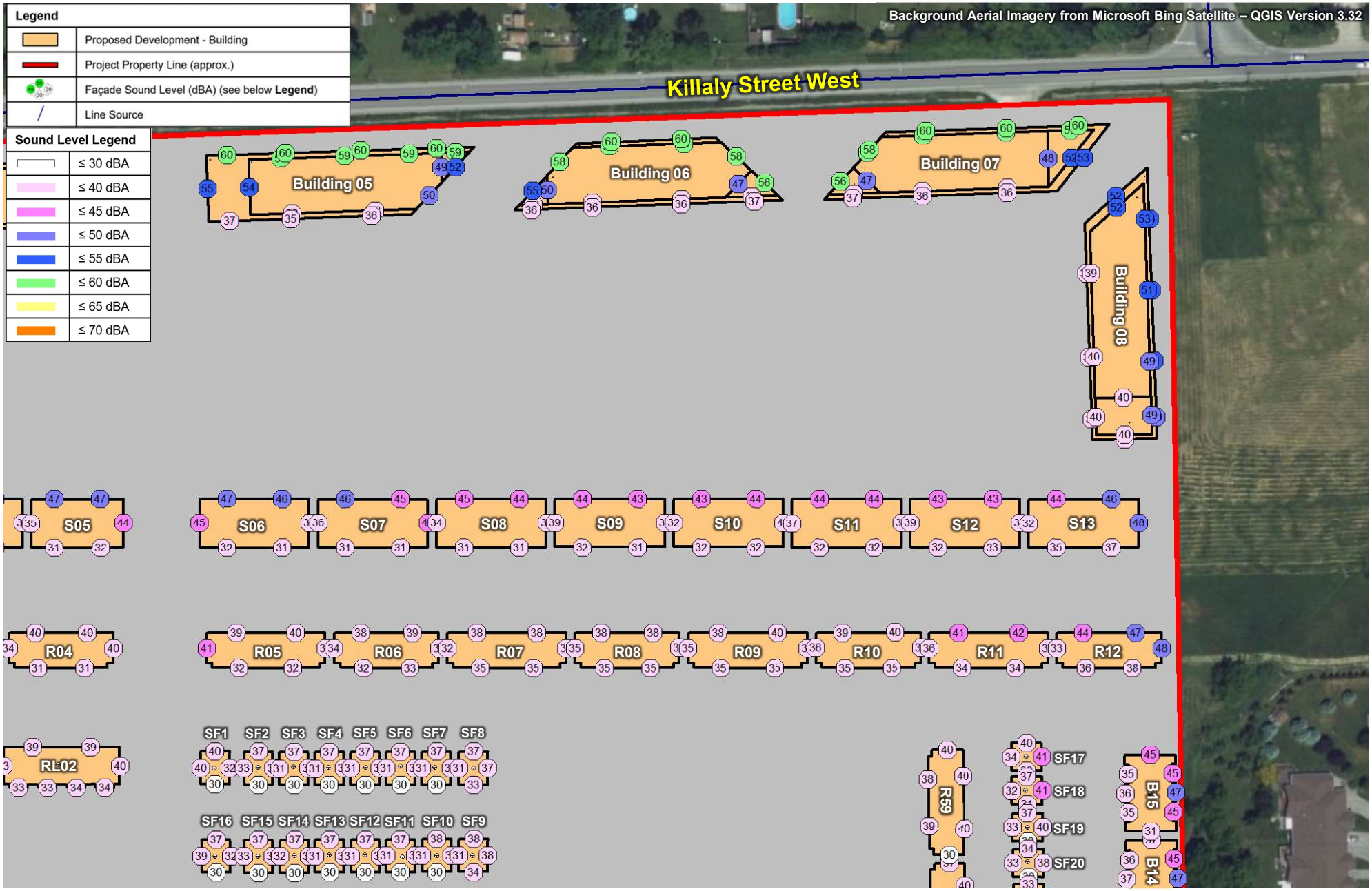
Rev 1.0

Project No.
241.V13413.00001

Figure No.
2d

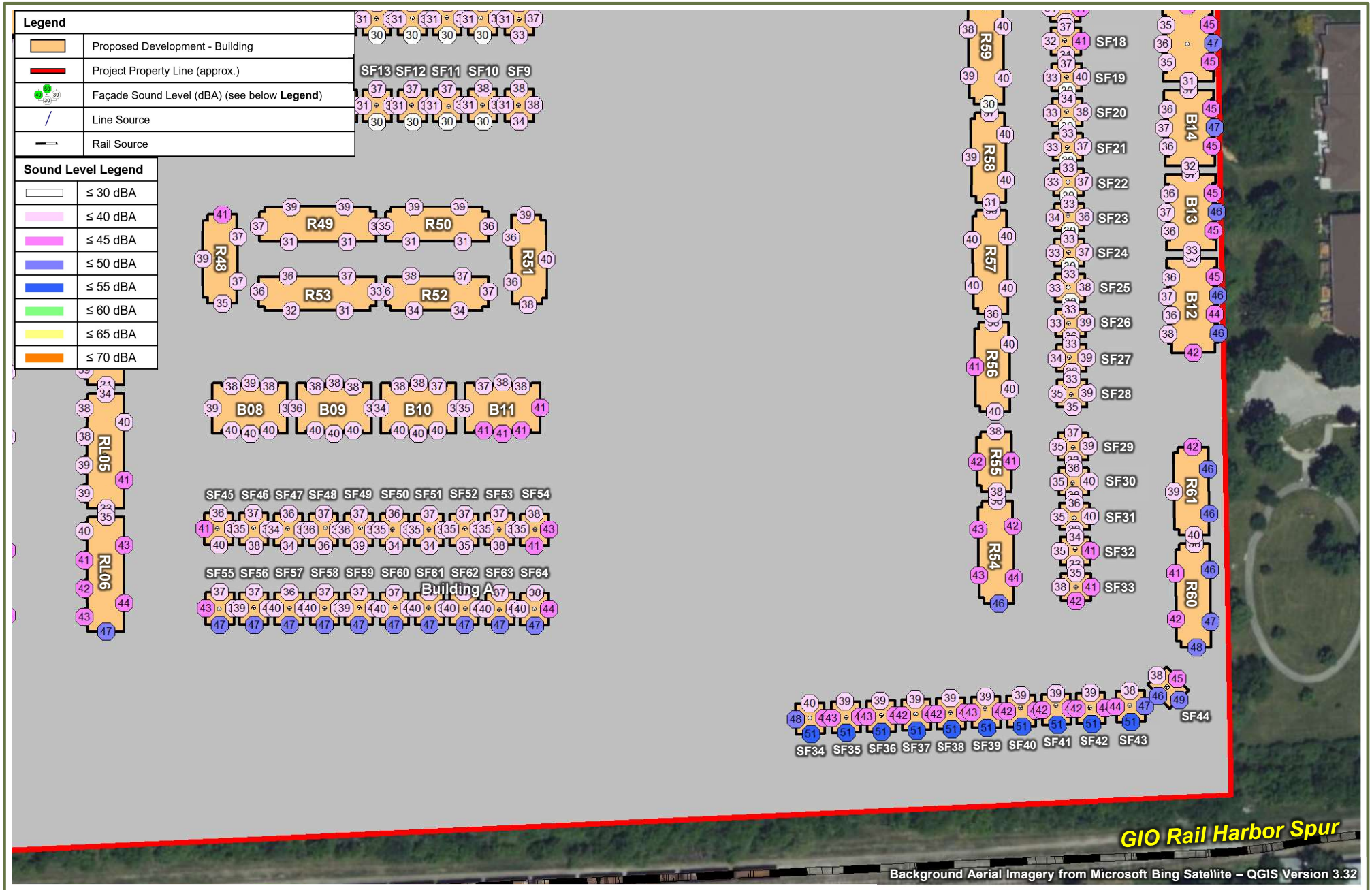
SLR

MAPLEVIEW	True North	Scale: 1:1,750	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **3a**
PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – NIGHTTIME NORTHWEST		Project No. 241.V13413.00001	

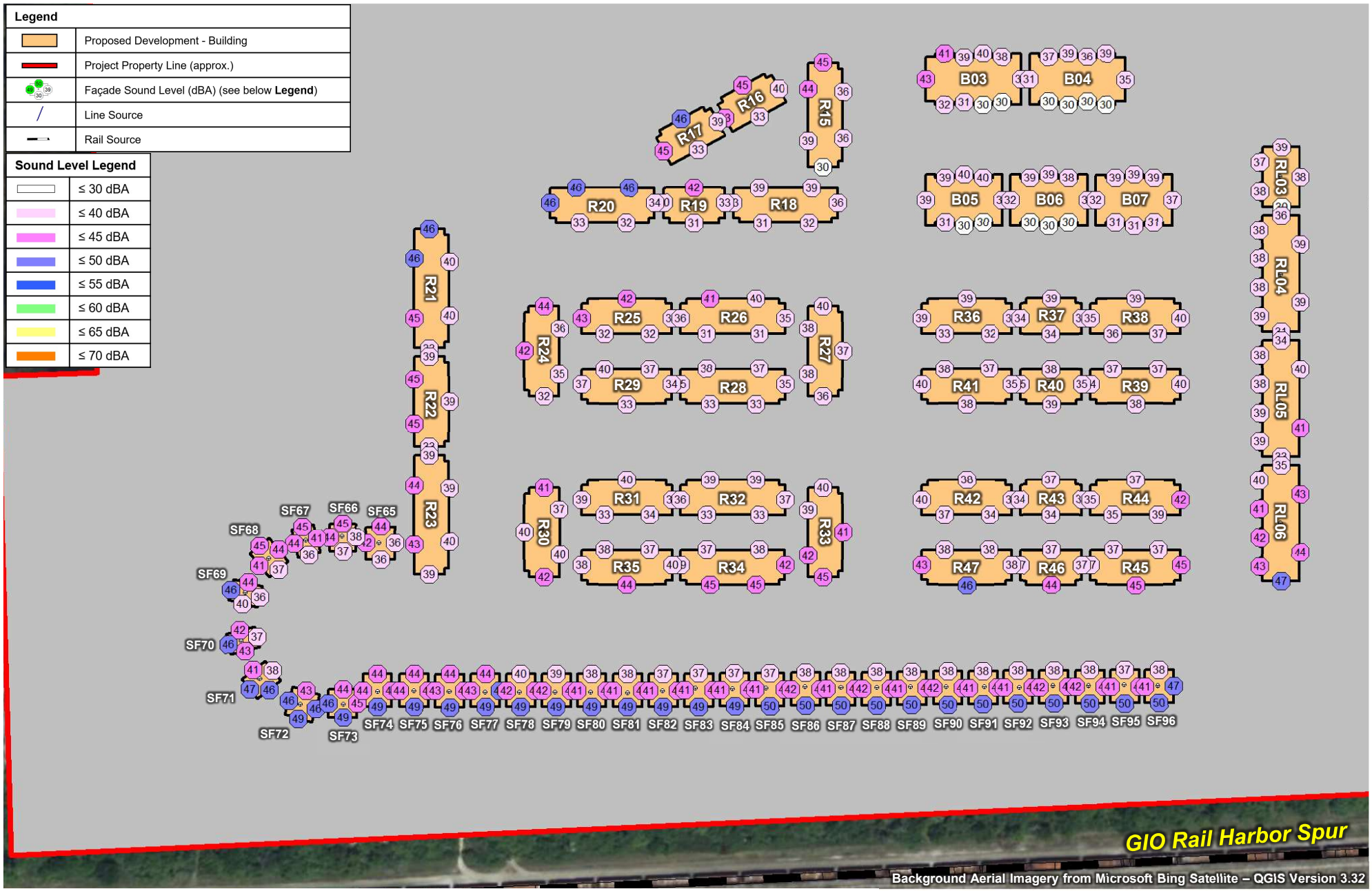


MAPLEVIEW	True North	Scale: 1:1,750	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **3b**
PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – NIGHTTIME NORTHEAST		Project No. 241.V13413.00001	

SLR



MAPLEVIEW	True North	Scale: 1:1,750	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **3c**
PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – NIGHTTIME SOUTHEAST		Project No. 241.V13413.00001	



MAPLEVIEW

KILLALY STREET WEST, PORT COLBORNE

PREDICTED FAÇADE SOUND LEVELS – ROAD + RAIL TRAFFIC – NIGHTTIME SOUTHWEST

True North

Scale: 1:1,750

METRES

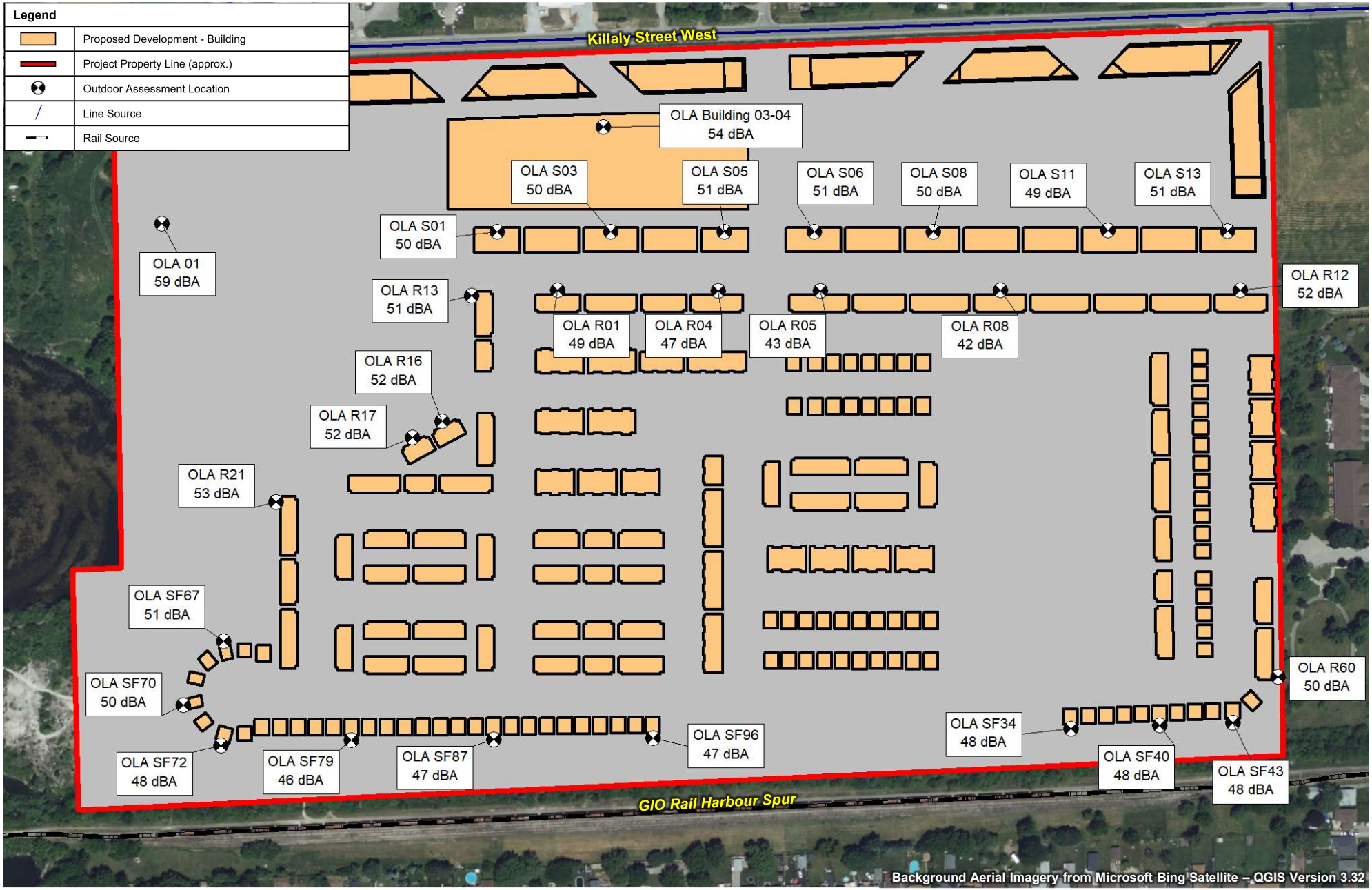
Date: Nov. 29, 2023

Rev 1.0

Project No. 241.V13413.00001

Figure No. **3d**

SLR



MAPLEVIEW

KILLALY STREET WEST, PORT COLBORNE

PREDICTED OUTDOOR LIVING AREA SOUND LEVELS – ROAD + RAIL TRAFFIC – DAYTIME

True North

Scale: 1:3,500

METRES

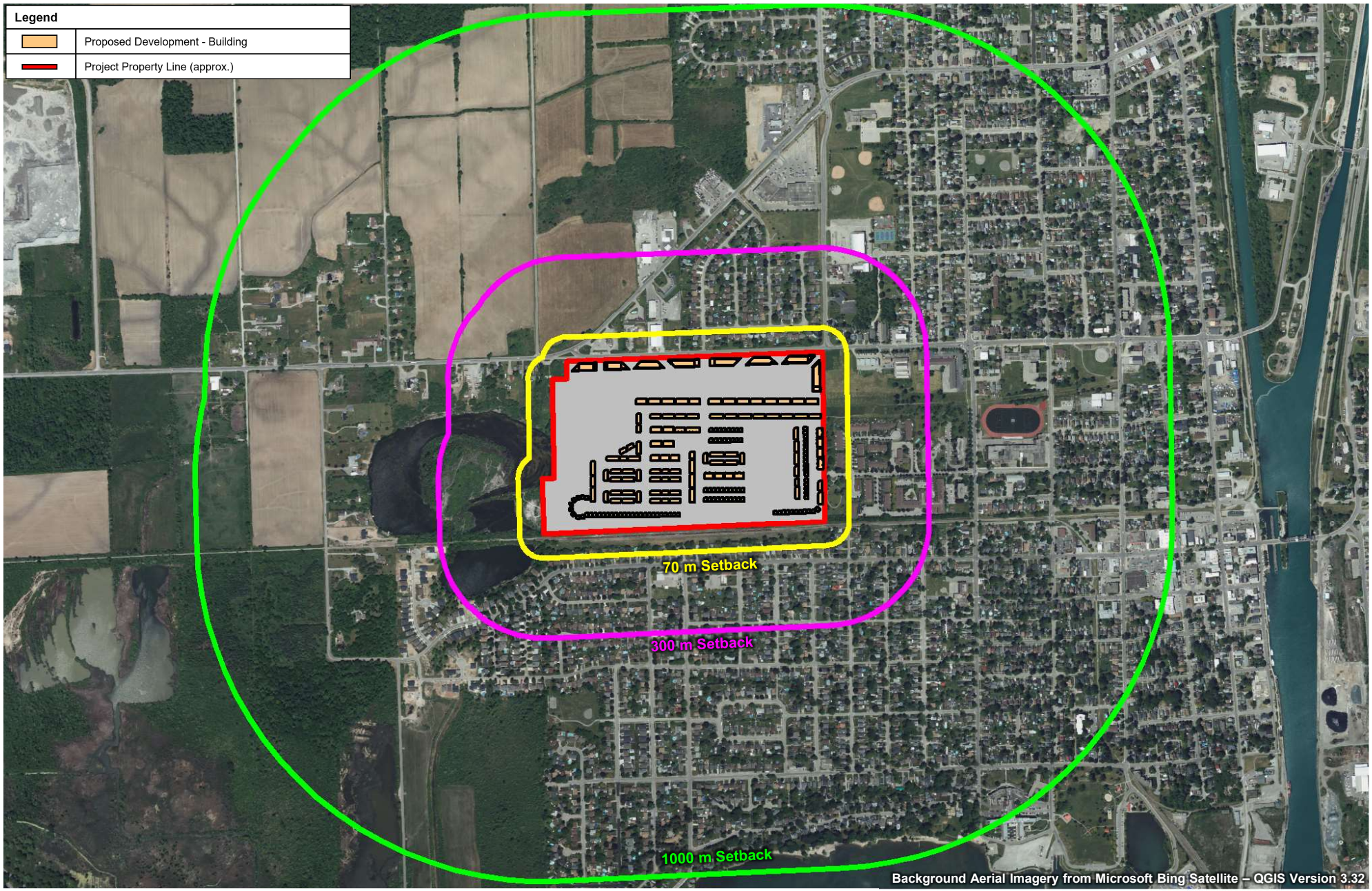
Date: Nov. 29, 2023

Rev 1.0

Project No. 241.V13413.00001

Figure No. **4**

SLR



MAPLEVIEW

KILLALY STREET WEST, PORT COLBORNE

STATIONARY SOURCES – D-6 SETBACK DISTANCES

True North

Scale: 1:15,000

METRES

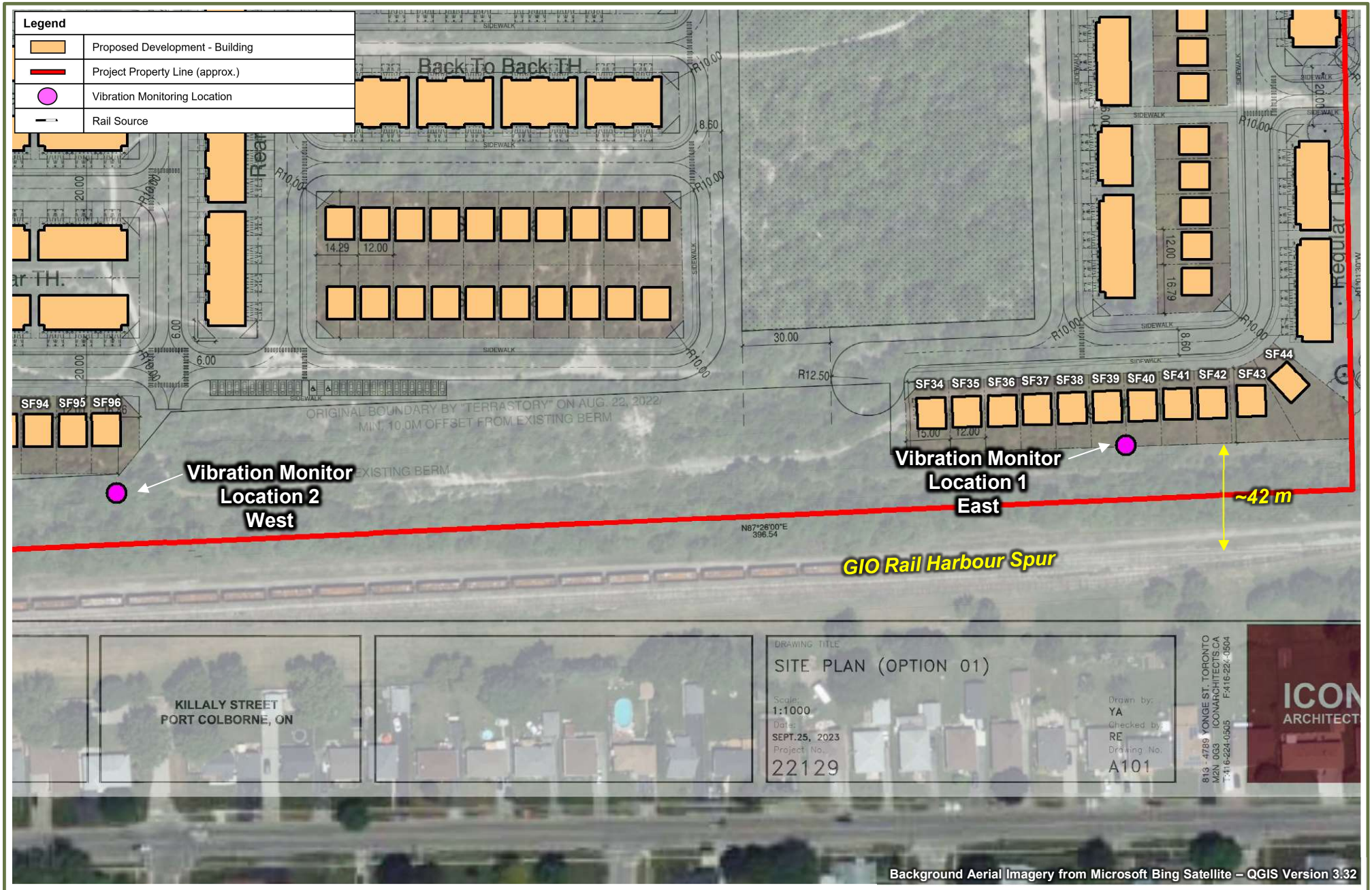
Date: Nov. 29, 2023

Rev 1.0

Project No. 241.V13413.00001

Figure No. **5**

SLR



MAPLEVIEW	True North	Scale: 1:1,750	METRES
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 29, 2023 Rev 1.0	Figure No. **6**
VIBRATION MONITORING LOCATIONS		Project No. 241.V13413.00001	SLR

Appendix A Development Drawings

Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

Mapleview

SLR Project No.: 241.V13413.00001

November 30, 2023

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LEGEND

- MIXED USE RESIDENTIAL BUILDING
- COMMERCIAL SPACE
- STACKED TOWNHOUSES
- BACK TO BACK TOWNHOUSES
- REGULAR TOWNHOUSES
- SINGLE FAMILY HOUSES
- REAR LANE TOWNHOUSES

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TRUE

KILLALY STREET
PORT COLBORNE, ON

DRAWING TITLE

SITE PLAN (OPTION 01)

Scale: 1:1000
Date: SEPT.25, 2023
Project No. 22129
Drawn by: YA
Checked by: RE
Drawing No. A101

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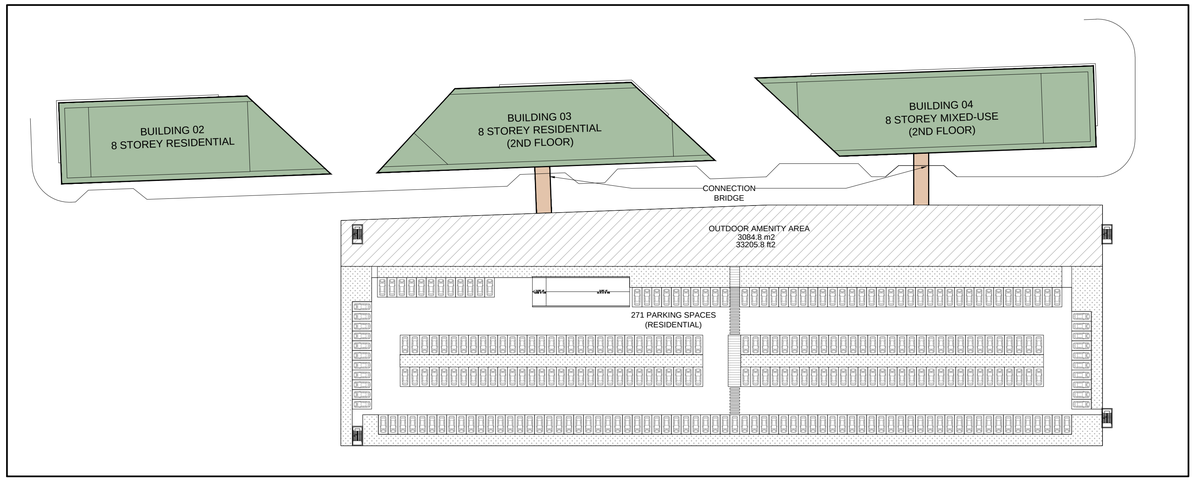

1 / A102 PARKING AREA SECOND FLOOR
SCALE - 1:750

PRELIMINARY STATS - MIXED-USE SITE AREA (High level and subject to change)

		m2	ft2	hectare
Gross Site Area		571,625.10	6,152,915.41	57.16
Developable Area		304,444.00	3,277,004.77	30.44
3.05M Road Widening Along Killaly St. W.		2,255.90	24,282.28	0.23
Net Developable Area		302,188.10	3,252,722.49	30.22
Mixed-Use Site Area		81,900.90	881,573.10	8.19
Total GFA (Including commercial)		85,878.20	924,384.36	
FSI (based on Mixed-Use Site Area)	1.05			
Total Units	1215			
Lot Coverage	TBD			
Landscape Coverage	TBD			
Building Height	TBD			

PRELIMINARY STATS - OPTION-01

		m2	ft2	hectare
Gross Site Area		571,625.10	6,152,915.41	57.16
Developable Area		304,444.00	3,277,004.77	30.44
3.05M Road Widening Along Killaly St. W.		2,255.90	24,282.28	0.23
Net Developable Area		302,188.10	3,252,722.49	30.22
Mixed-Use Site Area		81,900.90	881,573.10	8.19
Total Units (Mixed-Use Site)	1215			
Houses & Townhouses Site Area		211,053.20	2,271,755.54	21.11
Total Units (Houses & Townhouses Site)	879			
Total Units (All Site)	2094			

Apartment Buildings - Breakdown by Building	
Floors	Approx. Number of Units
Building 01	133
Building 02	133
Building 03	152
Building 04	161
Building 05	162
Building 06	153
Building 07	155
Building 08	166
Total Units	1215

Houses & Townhouses - Breakdown by Type	
Types of Units	Number of Units
Stacked Townhouses (3 Units / module)	228
Regular Townhouses	383
Back To Back Townhouses	130
Single Family Houses	96
Rear Lane Townhouses	42
Total Units	879

2 / A102 PROJECT STATISTICS
SCALE - N.T.S.

Apartment Buildings - Breakdown by Building					
Floors	GFA - Residential		GFA - Commercial		Approx. Number of Units
	m2	ft2	m2	ft2	
Building 01	8,850.70	95,268.05	0.00	0.00	133
Building 02	8,850.70	95,268.05	0.00	0.00	133
Building 03	10,556.00	113,623.73	0.00	0.00	152
Building 04	10,984.20	118,232.83	821.00	8,837.16	161
Building 05	10,984.20	118,232.83	821.00	8,837.16	162
Building 06	10,556.00	113,623.73	0.00	0.00	153
Building 07	10,632.50	114,447.17	798.60	8,596.05	155
Building 08	11,145.70	119,971.20	877.60	9,446.40	166
Total GFA - Residential	82,560.00	888,667.58			
Total GFA - Commercial			3,318.20	35,716.77	
Total GFA	85,878.20	924,384.36			1215

PARKING REQUIRED (By-law 6575/30/18)

	Units	Ratio	Required
Residential	1215	1.0	1215
Visitors	1215	0.25	304
Commercial (m2)	3,318.20	1/20m2	166
TOTAL			1685

PARKING PROVIDED

	Visitors	Residents
At Grade (Residential)		741
Parking at 1st Floor (Residential)		271
At Grade (Commercial & Visitors)	535	
	535	1012
TOTAL	1547	

ACCESSIBLE PARKING (By-law 6575/30/18)

NUMBER OF ACCESSIBLE PARKING SPACES	REQUIRED ACCESSIBLE PARKING	PROVIDED ACCESSIBLE PARKING
2% OF THE REQUIRED PARKING	34	34

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NORTH
TRUE

KILLALY STREET
PORT COLBORNE, ON

DRAWING TITLE
PARKING AREA (2ND FLOOR) & STATS

Scale: As Noted
Date: SEPT.25, 2023
Project No. 22129
Drawn by: YA
Checked by: RE
Drawing No. A102

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- COMMERCIAL SPACE
- STACKED TOWNHOUSES
- BACK TO BACK TOWNHOUSES
- REGULAR TOWNHOUSES
- SINGLE FAMILY HOUSES
- REAR LANE TOWNHOUSES

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TRUE

KILLALY STREET
PORT COLBORNE, ON

DRAWING TITLE
SITE PLAN (OPTION 01)

Scale: 1:1000
Date: SEPT.25, 2023
Project No. 22129
Drawn by: YA
Checked by: RE
Drawing No. A101

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Appendix B Traffic Data and Calculations

Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

Mapleview

SLR Project No.: 241.V13413.00001

November 30, 2023

TRANS-PLAN
transportation engineering

Turning Movement Count Diagram

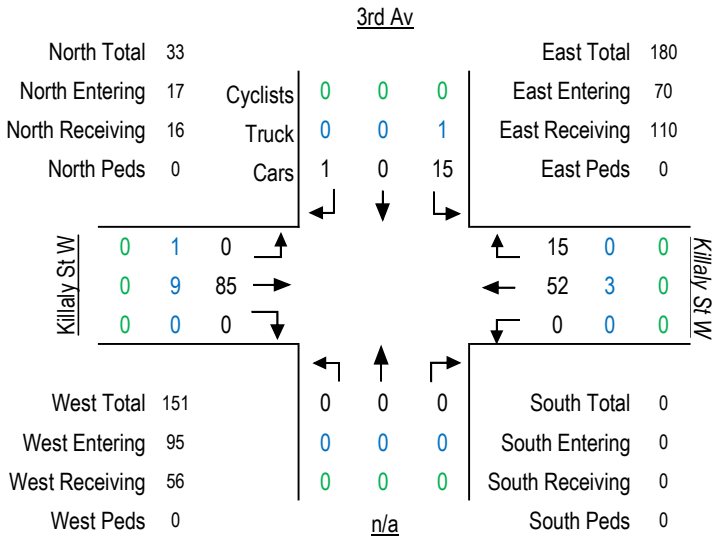
Intersection: Killaly Street West and 3rd Avenue

Intersection ID:

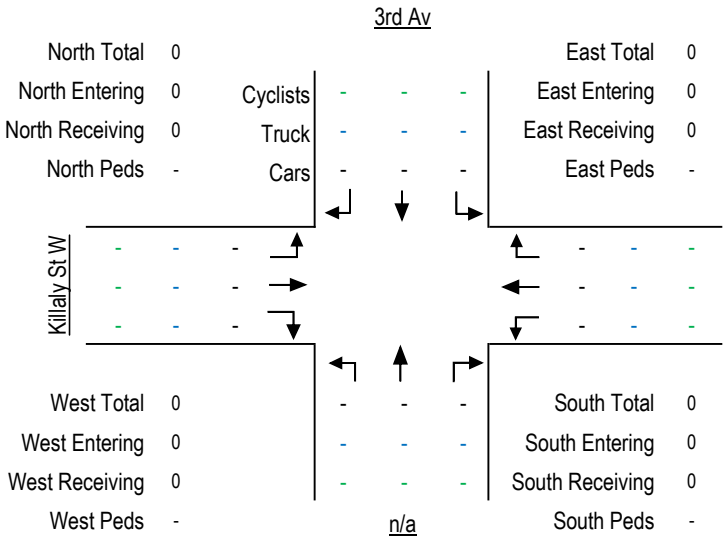
Municipality: Port Colborne, Ontario

Date: Wednesday, December 14, 2022

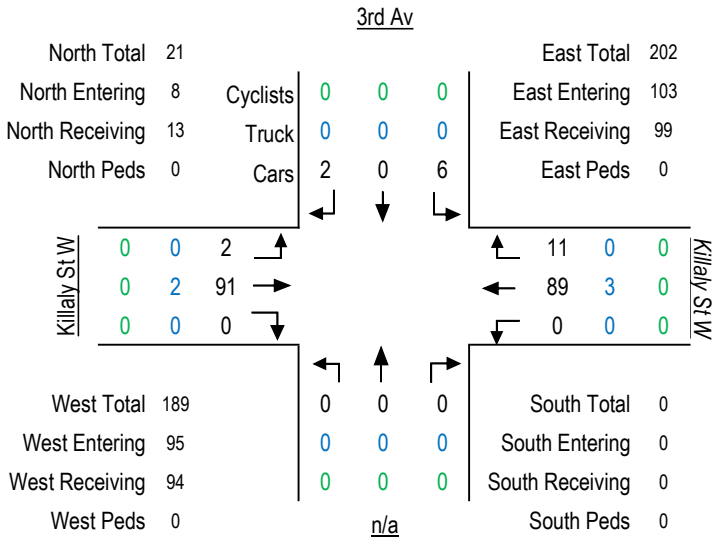
AM Peak Hour: 8:30 to 9:30



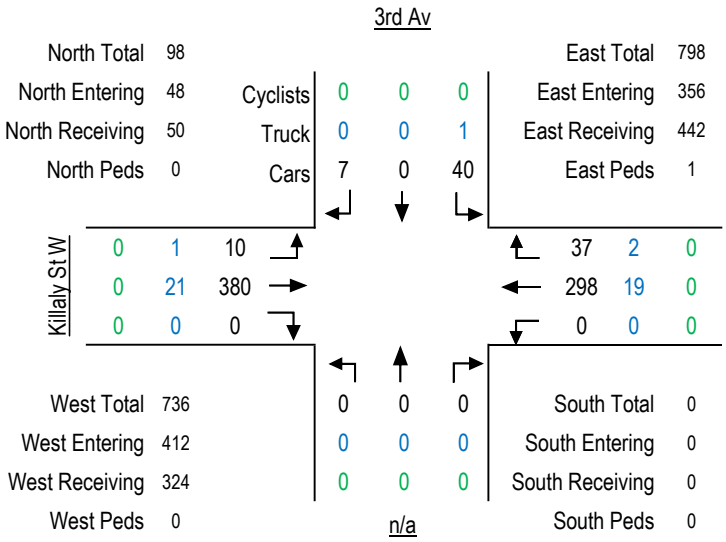
MD Peak Hour: - to -



PM Peak Hour: 16:30 to 17:30



Total 8-Hour Count



TRANS-PLAN
transportation engineering

Turning Movement Count Diagram

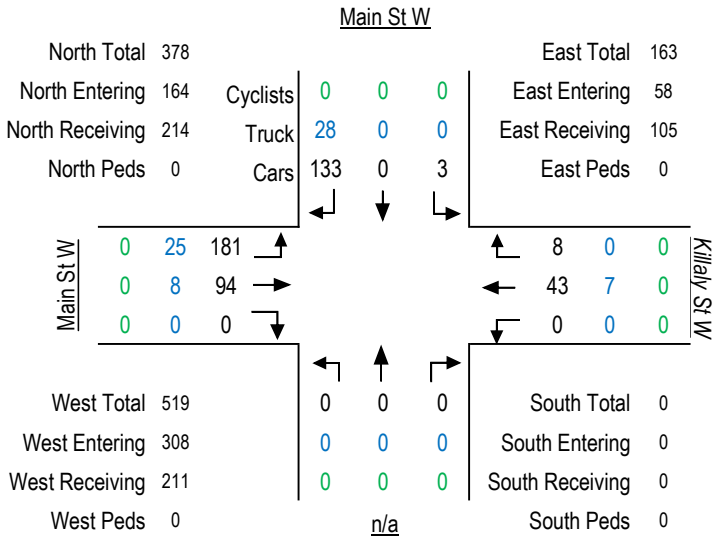
Intersection: Killaly Street West and Main Street West

Intersection ID:

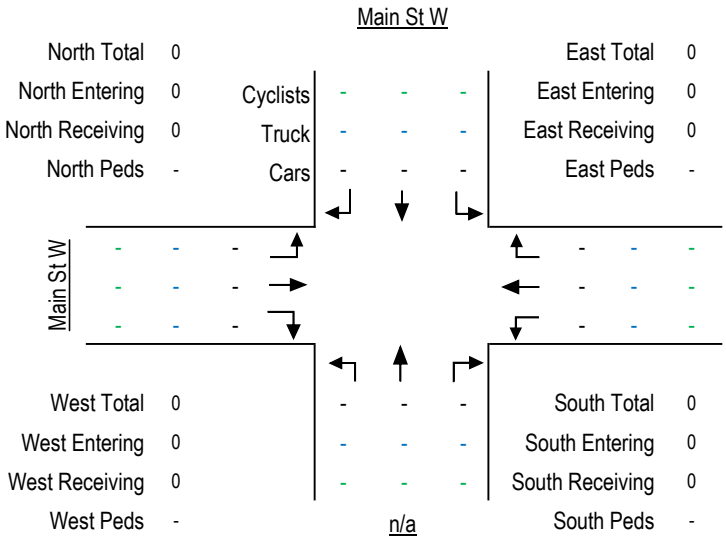
Municipality: Port Colborne, Ontario

Date: Wednesday, December 14, 2022

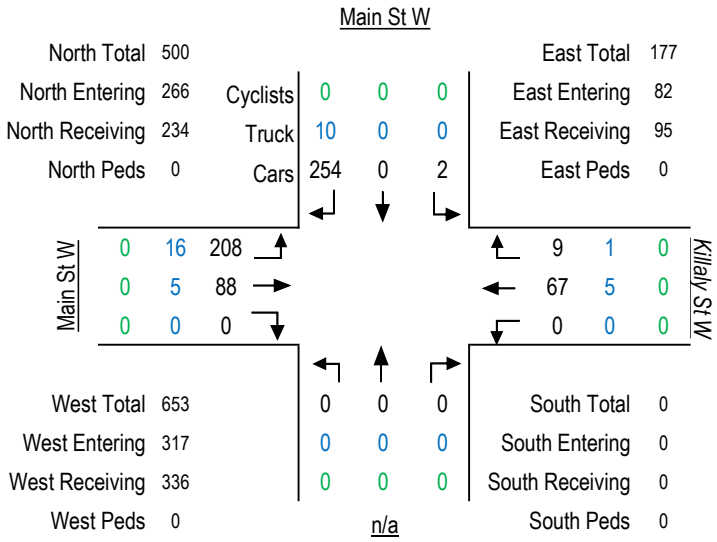
AM Peak Hour: 7:45 to 8:45



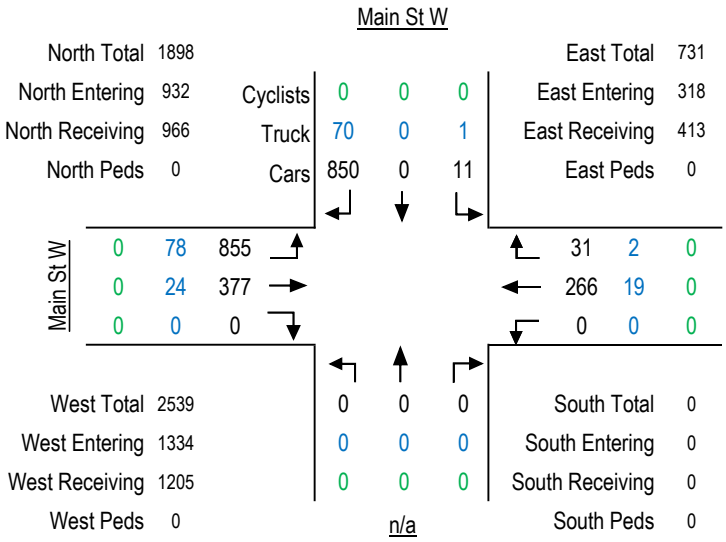
MD Peak Hour: - to -



PM Peak Hour: 16:00 to 17:00



Total 8-Hour Count



Turning Movement Count Diagram

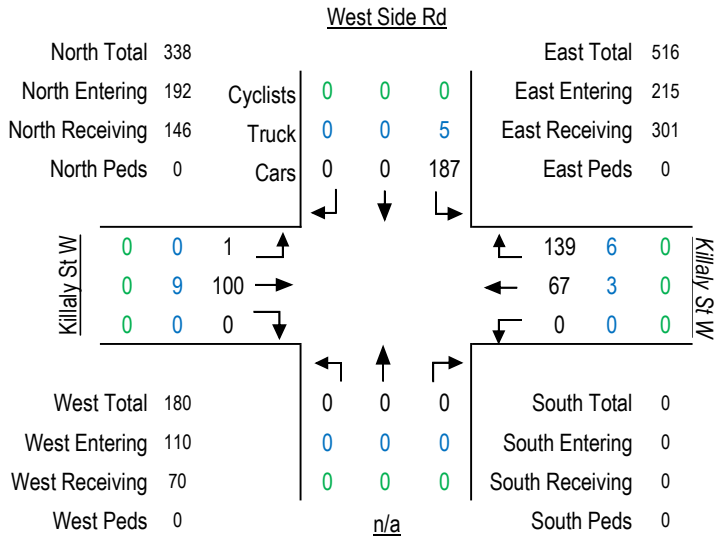
Intersection: Killaly Street West and West Side Road

Intersection ID:

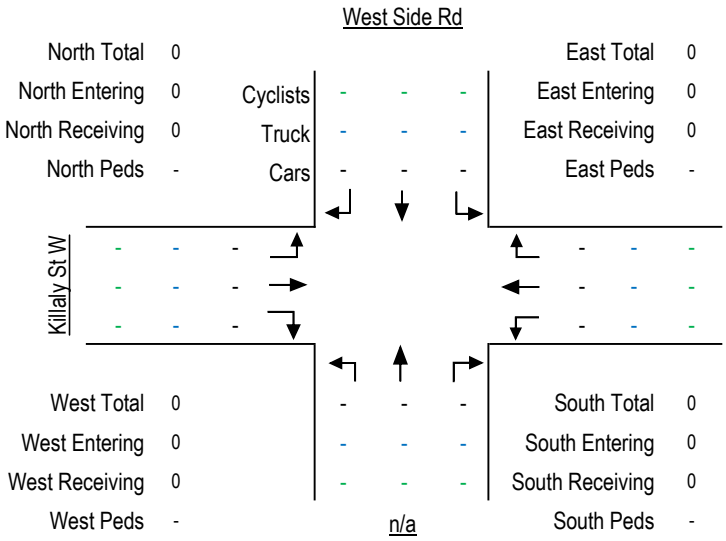
Municipality: Port Colborne, Ontario

Date: Wednesday, December 14, 2022

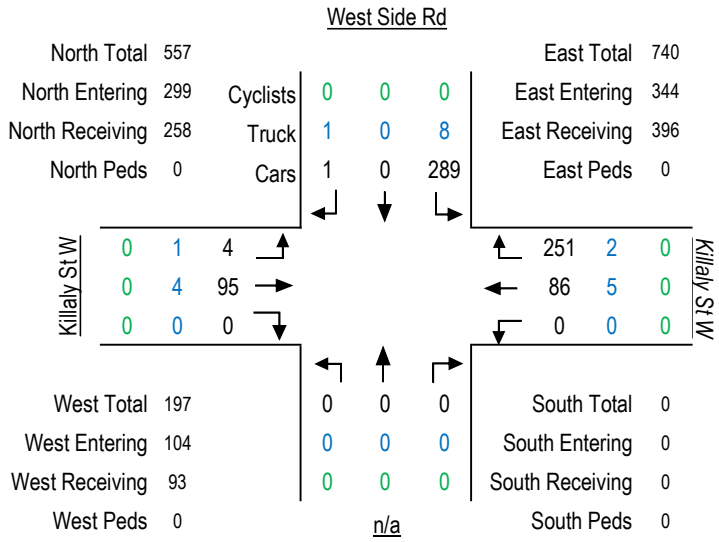
AM Peak Hour: 8:30 to 9:30



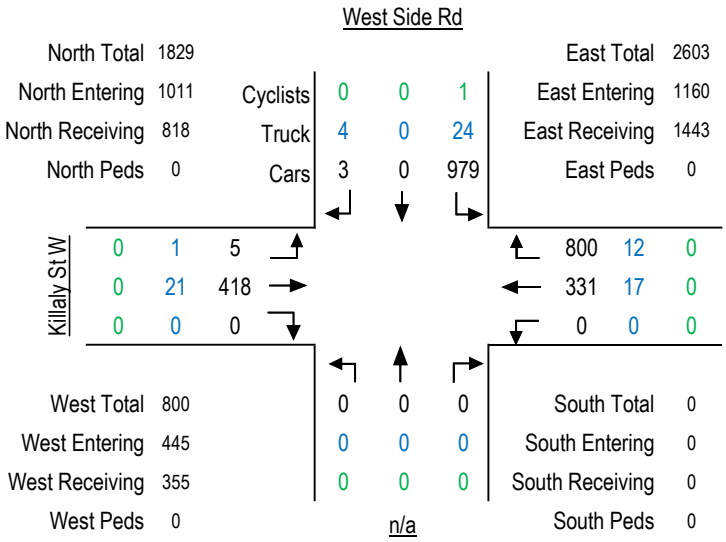
MD Peak Hour: - to -



PM Peak Hour: 16:00 to 17:00



Total 8-Hour Count



O R N A M E N T - Sound Power Emissions & Source Heights

Ontario Road Noise Analysis Method for Environment and Transportation

Road Segment ID	Roadway Name	Link Description	Speed (kph)	Period (h)	Total Traffic Volumes	Auto %	Med %	Hvy %	Auto	Med	Heavy	Road Gradient (%)	PWL (dBA)	Source Height, s (m)	Reference Leq (dBA)
Killaly_W_avg	Killaly Street West	Daytime Impacts	60	16	10296	94.5%	2.1%	3.4%	9730	216	350	0	**82.1**	**1.4**	**67.0**
		Nighttime Impacts	60	8	1144	94.2%	2.4%	3.4%	1078	27	39	0	**75.6**	**1.4**	**60.6**
Main_avg	Main Street (RR3)	Daytime Impacts	60	16	9086	90.4%	3.7%	5.9%	8213	336	536	0	**83.3**	**1.6**	**68.2**
		Nighttime Impacts	60	8	1010	90.4%	3.7%	5.9%	913	37	60	0	**76.7**	**1.6**	**61.7**
West_avg	West Side Road	Daytime Impacts	50	16	7750	97.3%	1.0%	1.7%	7541	77	132	0	**77.4**	**1.1**	**62.3**
		Nighttime Impacts	50	8	861	97.3%	1.0%	1.7%	838	9	15	0	**70.9**	**1.1**	**55.8**

Keni Mallinen

From: Aaron White <aaron.white@giorail.com>
Sent: December 20, 2022 4:08 PM
To: Keni Mallinen
Cc: Carload Services
Subject: RE: Rail Data Request - Port Colborne Harbor Railway - Harbour Spur

Good Afternoon Keni,

Yes, this is part of GIO Railways TRRY operation. The Port Colborne Harbour Railway identifier isn't used any more, but we still call it the Harbour Spur.

This is a low volume part of our operation, used mostly for rail car storage. Maximum speed is 10MPH. Number of cars per train could be anywhere from 1 to 60 – 60 would be if we are leaving cars in the yard for storage. One locomotive per movement only. Movements into this area are only there briefly to set cars into storage or run-around their train to go the other way. We do not keep locomotives here and the only time that a locomotive may be left idling at this location is if it has a mechanical problem or there is some issue that would prevent us from leaving.

As for vibration testing, we'd have to let you know when we see some traffic heading towards there that you could measure. Movements are sporadic at the moment as there is not a lot of business south of this location, and often the trains don't even reach here before reversing south towards the lake.

I'll respond to your other email in a moment.

Thanks,

AARON WHITE
GENERAL MANAGER OF RAILWAY ADMINISTRATION | GIO RMS
C. 289-968-9357 • P. 905-735-5529 • F. 905-735-7559
www.giorail.com

From: Keni Mallinen <kmallinen@slrconsulting.com>
Sent: December 15, 2022 4:22 PM
To: Aaron White <aaron.white@giorail.com>
Cc: Carload Services <carload@giorail.com>
Subject: Rail Data Request - Port Colborne Harbor Railway - Harbour Spur

Good afternoon,

My apologies the second email coming so quickly, but I realized that another project we're working on is also adjacent to a spur line operated by GIO Rail.

We are working on a noise and vibration study for a proposed development in Port Colborne, Ontario, south of Killaly St. W. and west of Steele Street. I have attached a map showing the project location.

Based on the RAC Canadian Rail Atlas, I understand this is the Port Colborne Harbour Railway – Harbour Spur, operated by GIO Rail. Part of our study requires looking at rail noise and vibration, so I was hoping to obtain or purchase data including the following, if available:

- Typical rail traffic volumes
    - Including travel speeds, number of cars, number of locomotives, on average
- Understanding of whether locomotives idle for any length of time along the spur, immediately south of the Project Location

Regarding vibration, we're typically required to conduct vibration measurements for our studies. Depending on the daily train traffic volumes, I'm wondering if it might be possible to coordinate attending the site sometime in January 2023 at a time that there will be a train arrival (if the line's active), to perform off-site vibration measurements at the same time.

Please advise if any of the above might be possible. I'm also available at 226-203-7385 if there's a chance we might be able to discuss over the phone.

Thank you for your time.

Best regards,
Keni

SLR

Keni Mallinen, M.A.Sc., P.Eng.
Acoustics Engineer

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E kmallinen@slrconsulting.com

SLR Consulting (Canada) Ltd.
100 Stone Road West, Suite 201, Guelph, ON N1G 5L3

Appendix B - Rail Traffic Noise Modelling Inputs

Name	ID	Lw' Day (dBA)	Lw' Night (dBA)	Train Class	Correct. Track (dB)	Vmax (km/h)	Height A (m)	E (m)	A_att	E_Att	Length (m)	Train Type 1 Type	No. Day	No. Night	Speed (km/h)	Throttle (1 to 8)
Gio Rail - Locomotive	GIO_loco	52.3	55.3	(local)	0		0.6		r		1578	FRA_CONV_FRE_LOC	2	2	16	8
Gio Rail - Wheel	GIO_wheel	41.1	44.1	(local)	0		0.6		r		1578	FTA_COMM_CAR	120	120	16	0

Receiver
Name: OLA SF43
ID: _OLA
X: 641619.99 m
Y: 4749759.38 m
Z: 180.50 m

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
2916	641610.82	4749716.19	182.65	0	D	52.3	4.5	10.1	0.0	0.0	0.0	37.8
2916	641610.82	4749716.19	182.65	0	N	55.3	4.5	10.1	0.0	0.0	0.0	40.8
2916	641610.82	4749716.19	182.65	0	E	-81.0	4.5	10.1	0.0	0.0	0.0	-96.3
2923	641637.17	4749717.26	183.02	0	D	52.3	4.5	12.1	0.0	0.0	0.0	35.8
2923	641637.17	4749717.26	183.02	0	N	55.3	4.5	12.1	0.0	0.0	0.0	38.8
2923	641637.17	4749717.26	183.02	0	E	-81.0	4.5	12.1	0.0	0.0	0.0	-98.3
2930	641628.01	4749716.89	183.03	0	D	52.3	4.5	11.9	0.0	0.0	0.0	35.9
2930	641628.01	4749716.89	183.03	0	N	55.3	4.5	11.9	0.0	0.0	0.0	38.9
2930	641628.01	4749716.89	183.03	0	E	-81.0	4.5	11.9	0.0	0.0	0.0	-98.2
2938	641567.27	4749714.24	182.65	0	D	52.3	4.5	13.6	0.0	0.0	0.0	34.3
2938	641567.27	4749714.24	182.65	0	N	55.3	4.5	13.6	0.0	0.0	0.0	37.3
2938	641567.27	4749714.24	182.65	0	E	-81.0	4.5	13.6	0.0	0.0	0.0	-99.8
2944	641650.65	4749717.98	182.95	0	D	52.3	4.5	13.2	0.0	0.0	0.0	34.6
2944	641650.65	4749717.98	182.95	0	N	55.3	4.5	13.2	0.0	0.0	0.0	37.6
2944	641650.65	4749717.98	182.95	0	E	-81.0	4.5	13.2	0.0	0.0	0.0	-99.5
2951	641784.56	4749728.05	182.92	0	D	52.3	4.1	15.9	0.0	0.0	0.0	32.4
2951	641784.56	4749728.05	182.92	0	N	55.3	4.1	15.9	0.0	0.0	0.0	35.4
2951	641784.56	4749728.05	182.92	0	E	-81.0	4.1	15.9	0.0	0.0	0.0	-101.7
2956	641742.55	4749726.17	182.90	0	D	52.3	4.0	16.9	0.0	0.0	0.0	31.4
2956	641742.55	4749726.17	182.90	0	N	55.3	4.0	16.9	0.0	0.0	0.0	34.4
2956	641742.55	4749726.17	182.90	0	E	-81.0	4.0	16.9	0.0	0.0	0.0	-102.6
2963	641599.01	4749715.71	182.65	0	D	52.3	4.5	15.8	0.0	0.0	0.0	32.1
2963	641599.01	4749715.71	182.65	0	N	55.3	4.5	15.8	0.0	0.0	0.0	35.1
2963	641599.01	4749715.71	182.65	0	E	-81.0	4.5	15.8	0.0	0.0	0.0	-102.0
2970	641584.49	4749715.06	182.65	0	D	52.3	4.5	16.1	0.0	0.0	0.0	31.7
2970	641584.49	4749715.06	182.65	0	N	55.3	4.5	16.1	0.0	0.0	0.0	34.7
2970	641584.49	4749715.06	182.65	0	E	-81.0	4.5	16.1	0.0	0.0	0.0	-102.3
2976	641657.74	4749718.54	182.94	0	D	52.3	4.7	16.3	0.0	0.0	0.0	31.3
2976	641657.74	4749718.54	182.94	0	N	55.3	4.7	16.3	0.0	0.0	0.0	34.3
2976	641657.74	4749718.54	182.94	0	E	-81.0	4.7	16.3	0.0	0.0	0.0	-102.7
2982	641677.51	4749721.43	182.94	0	D	52.3	4.9	16.6	0.0	0.0	0.0	30.8
2982	641677.51	4749721.43	182.94	0	N	55.3	4.9	16.6	0.0	0.0	0.0	33.8
2982	641677.51	4749721.43	182.94	0	E	-81.0	4.9	16.6	0.0	0.0	0.0	-103.2
2989	641643.62	4749717.55	182.96	0	D	52.3	4.5	16.9	0.0	0.0	0.0	30.9
2989	641643.62	4749717.55	182.96	0	N	55.3	4.5	16.9	0.0	0.0	0.0	33.9
2989	641643.62	4749717.55	182.96	0	E	-81.0	4.5	16.9	0.0	0.0	0.0	-103.2
2996	641538.84	4749712.88	182.98	0	D	52.3	4.5	17.4	0.0	0.0	0.0	30.5
2996	641538.84	4749712.88	182.98	0	N	55.3	4.5	17.4	0.0	0.0	0.0	33.5
2996	641538.84	4749712.88	182.98	0	E	-81.0	4.5	17.4	0.0	0.0	0.0	-103.6
3002	641525.62	4749712.28	182.94	0	D	52.3	4.5	17.4	0.0	0.0	0.0	30.4
3002	641525.62	4749712.28	182.94	0	N	55.3	4.5	17.4	0.0	0.0	0.0	33.4
3002	641525.62	4749712.28	182.94	0	E	-81.0	4.5	17.4	0.0	0.0	0.0	-103.7
3009	641670.54	4749720.27	182.88	0	D	52.3	4.9	16.9	0.0	0.0	0.0	30.6
3009	641670.54	4749720.27	182.88	0	N	55.3	4.9	16.9	0.0	0.0	0.0	33.6
3009	641670.54	4749720.27	182.88	0	E	-81.0	4.9	16.9	0.0	0.0	0.0	-103.5
3016	641589.29	4749715.28	182.65	0	D	52.3	4.5	17.5	0.0	0.0	0.0	30.4
3016	641589.29	4749715.28	182.65	0	N	55.3	4.5	17.5	0.0	0.0	0.0	33.4
3016	641589.29	4749715.28	182.65	0	E	-81.0	4.5	17.5	0.0	0.0	0.0	-103.7
3023	641662.42	4749719.09	182.93	0	D	52.3	4.7	17.4	0.0	0.0	0.0	30.2
3023	641662.42	4749719.09	182.93	0	N	55.3	4.7	17.4	0.0	0.0	0.0	33.2
3023	641662.42	4749719.09	182.93	0	E	-81.0	4.7	17.4	0.0	0.0	0.0	-103.9
3030	641618.96	4749716.52	182.65	0	D	52.3	4.5	18.1	0.0	0.0	0.0	29.8

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3030	641618.96	4749716.52	182.65	0	N	55.3	4.5	18.1	0.0	0.0	0.0	32.8
3030	641618.96	4749716.52	182.65	0	E	-81.0	4.5	18.1	0.0	0.0	0.0	-104.3
3035	641602.51	4749715.85	182.65	0	D	52.3	4.5	18.2	0.0	0.0	0.0	29.6
3035	641602.51	4749715.85	182.65	0	N	55.3	4.5	18.2	0.0	0.0	0.0	32.6
3035	641602.51	4749715.85	182.65	0	E	-81.0	4.5	18.2	0.0	0.0	0.0	-104.4
3043	641556.35	4749713.72	182.88	0	D	52.3	4.5	18.5	0.0	0.0	0.0	29.4
3043	641556.35	4749713.72	182.88	0	N	55.3	4.5	18.5	0.0	0.0	0.0	32.4
3043	641556.35	4749713.72	182.88	0	E	-81.0	4.5	18.5	0.0	0.0	0.0	-104.7
3050	641595.37	4749715.56	182.65	0	D	52.3	4.5	18.3	0.0	0.0	0.0	29.5
3050	641595.37	4749715.56	182.65	0	N	55.3	4.5	18.3	0.0	0.0	0.0	32.5
3050	641595.37	4749715.56	182.65	0	E	-81.0	4.5	18.3	0.0	0.0	0.0	-104.5
3055	641683.70	4749722.38	182.95	0	D	52.3	4.8	18.3	0.0	0.0	0.0	29.3
3055	641683.70	4749722.38	182.95	0	N	55.3	4.8	18.3	0.0	0.0	0.0	32.3
3055	641683.70	4749722.38	182.95	0	E	-81.0	4.8	18.3	0.0	0.0	0.0	-104.8
3060	641592.59	4749715.44	182.65	0	D	52.3	4.5	18.5	0.0	0.0	0.0	29.4
3060	641592.59	4749715.44	182.65	0	N	55.3	4.5	18.5	0.0	0.0	0.0	32.4
3060	641592.59	4749715.44	182.65	0	E	-81.0	4.5	18.5	0.0	0.0	0.0	-104.7
3063	641622.63	4749716.67	182.82	0	D	52.3	4.4	18.4	0.0	0.0	0.0	29.5
3063	641622.63	4749716.67	182.82	0	N	55.3	4.4	18.4	0.0	0.0	0.0	32.5
3063	641622.63	4749716.67	182.82	0	E	-81.0	4.4	18.4	0.0	0.0	0.0	-104.6
3068	641576.92	4749714.70	182.65	0	D	52.3	4.5	18.7	0.0	0.0	0.0	29.2
3068	641576.92	4749714.70	182.65	0	N	55.3	4.5	18.7	0.0	0.0	0.0	32.2
3068	641576.92	4749714.70	182.65	0	E	-81.0	4.5	18.7	0.0	0.0	0.0	-104.9
3073	641724.29	4749725.36	182.89	0	D	52.3	4.1	20.0	0.0	0.0	0.0	28.3
3073	641724.29	4749725.36	182.89	0	N	55.3	4.1	20.0	0.0	0.0	0.0	31.3
3073	641724.29	4749725.36	182.89	0	E	-81.0	4.1	20.0	0.0	0.0	0.0	-105.8
3078	641693.58	4749723.53	182.95	0	D	52.3	4.4	19.8	0.0	0.0	0.0	28.1
3078	641693.58	4749723.53	182.95	0	N	55.3	4.4	19.8	0.0	0.0	0.0	31.1
3078	641693.58	4749723.53	182.95	0	E	-81.0	4.4	19.8	0.0	0.0	0.0	-106.0
3084	641688.73	4749723.03	182.96	0	D	52.3	4.6	19.7	0.0	0.0	0.0	28.0
3084	641688.73	4749723.03	182.96	0	N	55.3	4.6	19.7	0.0	0.0	0.0	31.0
3084	641688.73	4749723.03	182.96	0	E	-81.0	4.6	19.7	0.0	0.0	0.0	-106.1
3091	641550.93	4749713.46	183.07	0	D	52.3	4.5	20.5	0.0	0.0	0.0	27.3
3091	641550.93	4749713.46	183.07	0	N	55.3	4.5	20.5	0.0	0.0	0.0	30.3
3091	641550.93	4749713.46	183.07	0	E	-81.0	4.5	20.5	0.0	0.0	0.0	-106.7
3097	641698.73	4749724.00	182.91	0	D	52.3	4.4	21.0	0.0	0.0	0.0	26.9
3097	641698.73	4749724.00	182.91	0	N	55.3	4.4	21.0	0.0	0.0	0.0	29.9
3097	641698.73	4749724.00	182.91	0	E	-81.0	4.4	21.0	0.0	0.0	0.0	-107.1
3107	641716.59	4749725.02	182.89	0	D	52.3	4.0	21.8	0.0	0.0	0.0	26.5
3107	641716.59	4749725.02	182.89	0	N	55.3	4.0	21.8	0.0	0.0	0.0	29.5
3107	641716.59	4749725.02	182.89	0	E	-81.0	4.0	21.8	0.0	0.0	0.0	-107.6
3113	641579.79	4749714.83	182.65	0	D	52.3	4.5	21.5	0.0	0.0	0.0	26.4
3113	641579.79	4749714.83	182.65	0	N	55.3	4.5	21.5	0.0	0.0	0.0	29.4
3113	641579.79	4749714.83	182.65	0	E	-81.0	4.5	21.5	0.0	0.0	0.0	-107.7
3120	641621.23	4749716.61	182.65	0	D	52.3	4.5	21.8	0.0	0.0	0.0	26.1
3120	641621.23	4749716.61	182.65	0	N	55.3	4.5	21.8	0.0	0.0	0.0	29.1
3120	641621.23	4749716.61	182.65	0	E	-81.0	4.5	21.8	0.0	0.0	0.0	-108.0
3125	641666.67	4749719.63	182.89	0	D	52.3	4.9	21.7	0.0	0.0	0.0	25.8
3125	641666.67	4749719.63	182.89	0	N	55.3	4.9	21.7	0.0	0.0	0.0	28.8
3125	641666.67	4749719.63	182.89	0	E	-81.0	4.9	21.7	0.0	0.0	0.0	-108.3
3131	641705.76	4749724.49	182.85	0	D	52.3	4.2	22.8	0.0	0.0	0.0	25.3
3131	641705.76	4749724.49	182.85	0	N	55.3	4.2	22.8	0.0	0.0	0.0	28.4
3131	641705.76	4749724.49	182.85	0	E	-81.0	4.2	22.8	0.0	0.0	0.0	-108.7
3136	641620.40	4749716.58	182.65	0	D	52.3	4.5	22.4	0.0	0.0	0.0	25.4
3136	641620.40	4749716.58	182.65	0	N	55.3	4.5	22.4	0.0	0.0	0.0	28.4
3136	641620.40	4749716.58	182.65	0	E	-81.0	4.5	22.4	0.0	0.0	0.0	-108.6
3160	641494.78	4749710.94	182.65	0	D	52.3	4.5	23.0	0.0	0.0	0.0	24.9
3160	641494.78	4749710.94	182.65	0	N	55.3	4.5	23.0	0.0	0.0	0.0	27.9
3160	641494.78	4749710.94	182.65	0	E	-81.0	4.5	23.0	0.0	0.0	0.0	-109.2
3176	641709.12	4749724.69	182.85	0	D	52.3	4.2	23.5	0.0	0.0	0.0	24.6
3176	641709.12	4749724.69	182.85	0	N	55.3	4.2	23.5	0.0	0.0	0.0	27.6
3176	641709.12	4749724.69	182.85	0	E	-81.0	4.2	23.5	0.0	0.0	0.0	-109.4
3182	641702.34	4749724.29	182.89	0	D	52.3	4.2	23.5	0.0	0.0	0.0	24.6

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3182	641702.34	4749724.29	182.89	0	N	55.3	4.2	23.5	0.0	0.0	0.0	27.7
3182	641702.34	4749724.29	182.89	0	E	-81.0	4.2	23.5	0.0	0.0	0.0	-109.4
3189	641665.20	4749719.42	182.91	0	D	52.3	4.7	23.1	0.0	0.0	0.0	24.5
3189	641665.20	4749719.42	182.91	0	N	55.3	4.7	23.1	0.0	0.0	0.0	27.5
3189	641665.20	4749719.42	182.91	0	E	-81.0	4.7	23.1	0.0	0.0	0.0	-109.5
3195	641547.51	4749713.29	183.02	0	D	52.3	4.5	23.6	0.0	0.0	0.0	24.3
3195	641547.51	4749713.29	183.02	0	N	55.3	4.5	23.6	0.0	0.0	0.0	27.3
3195	641547.51	4749713.29	183.02	0	E	-81.0	4.5	23.6	0.0	0.0	0.0	-109.8
3201	641832.59	4749730.25	182.94	0	D	52.3	4.1	24.2	0.0	0.0	0.0	24.1
3201	641832.59	4749730.25	182.94	0	N	55.3	4.1	24.2	0.0	0.0	0.0	27.1
3201	641832.59	4749730.25	182.94	0	E	-81.0	4.1	24.2	0.0	0.0	0.0	-110.0
3207	641819.35	4749729.64	182.94	0	D	52.3	4.1	24.2	0.0	0.0	0.0	24.0
3207	641819.35	4749729.64	182.94	0	N	55.3	4.1	24.2	0.0	0.0	0.0	27.0
3207	641819.35	4749729.64	182.94	0	E	-81.0	4.1	24.2	0.0	0.0	0.0	-110.0
3212	641645.70	4749717.68	182.95	0	D	52.3	4.5	23.6	0.0	0.0	0.0	24.2
3212	641645.70	4749717.68	182.95	0	N	55.3	4.5	23.6	0.0	0.0	0.0	27.2
3212	641645.70	4749717.68	182.95	0	E	-81.0	4.5	23.6	0.0	0.0	0.0	-109.8
3217	641712.24	4749724.85	182.88	0	D	52.3	4.0	24.2	0.0	0.0	0.0	24.1
3217	641712.24	4749724.85	182.88	0	N	55.3	4.0	24.2	0.0	0.0	0.0	27.1
3217	641712.24	4749724.85	182.88	0	E	-81.0	4.0	24.2	0.0	0.0	0.0	-110.0
3224	641512.72	4749711.72	182.91	0	D	52.3	4.5	23.9	0.0	0.0	0.0	23.9
3224	641512.72	4749711.72	182.91	0	N	55.3	4.5	23.9	0.0	0.0	0.0	26.9
3224	641512.72	4749711.72	182.91	0	E	-81.0	4.5	23.9	0.0	0.0	0.0	-110.2
3235	641356.22	4749704.63	182.37	0	D	52.3	4.5	24.3	0.0	0.0	0.0	23.5
3235	641356.22	4749704.63	182.37	0	N	55.3	4.5	24.3	0.0	0.0	0.0	26.5
3235	641356.22	4749704.63	182.37	0	E	-81.0	4.5	24.3	0.0	0.0	0.0	-110.6
3243	641516.53	4749711.89	182.91	0	D	52.3	4.5	24.3	0.0	0.0	0.0	23.5
3243	641516.53	4749711.89	182.91	0	N	55.3	4.5	24.3	0.0	0.0	0.0	26.6
3243	641516.53	4749711.89	182.91	0	E	-81.0	4.5	24.3	0.0	0.0	0.0	-110.5
3247	641487.09	4749710.61	182.65	0	D	52.3	4.5	24.5	0.0	0.0	0.0	23.4
3247	641487.09	4749710.61	182.65	0	N	55.3	4.5	24.5	0.0	0.0	0.0	26.4
3247	641487.09	4749710.61	182.65	0	E	-81.0	4.5	24.5	0.0	0.0	0.0	-110.7
3251	641500.27	4749711.18	182.65	0	D	52.3	4.5	24.5	0.0	0.0	0.0	23.3
3251	641500.27	4749711.18	182.65	0	N	55.3	4.5	24.5	0.0	0.0	0.0	26.3
3251	641500.27	4749711.18	182.65	0	E	-81.0	4.5	24.5	0.0	0.0	0.0	-110.7
3252	641581.16	4749714.90	182.65	0	D	52.3	4.5	24.7	0.0	0.0	0.0	23.1
3252	641581.16	4749714.90	182.65	0	N	55.3	4.5	24.7	0.0	0.0	0.0	26.1
3252	641581.16	4749714.90	182.65	0	E	-81.0	4.5	24.7	0.0	0.0	0.0	-111.0
3268	641388.41	4749706.12	182.52	0	D	52.3	4.4	25.5	0.0	0.0	0.0	22.4
3268	641388.41	4749706.12	182.52	0	N	55.3	4.4	25.5	0.0	0.0	0.0	25.4
3268	641388.41	4749706.12	182.52	0	E	-81.0	4.4	25.5	0.0	0.0	0.0	-111.7
3273	641504.07	4749711.35	182.78	0	D	52.3	4.5	25.3	0.0	0.0	0.0	22.5
3273	641504.07	4749711.35	182.78	0	N	55.3	4.5	25.3	0.0	0.0	0.0	25.5
3273	641504.07	4749711.35	182.78	0	E	-81.0	4.5	25.3	0.0	0.0	0.0	-111.5
3278	641844.87	4749730.81	182.94	0	D	52.3	4.1	26.0	0.0	0.0	0.0	22.3
3278	641844.87	4749730.81	182.94	0	N	55.3	4.1	26.0	0.0	0.0	0.0	25.3
3278	641844.87	4749730.81	182.94	0	E	-81.0	4.1	26.0	0.0	0.0	0.0	-111.8
3282	641545.53	4749713.20	183.01	0	D	52.3	4.5	25.5	0.0	0.0	0.0	22.4
3282	641545.53	4749713.20	183.01	0	N	55.3	4.5	25.5	0.0	0.0	0.0	25.4
3282	641545.53	4749713.20	183.01	0	E	-81.0	4.5	25.5	0.0	0.0	0.0	-111.7
3288	641917.72	4749734.20	182.97	0	D	52.3	4.1	26.3	0.0	0.0	0.0	21.9
3288	641917.72	4749734.20	182.97	0	N	55.3	4.1	26.3	0.0	0.0	0.0	25.0
3288	641917.72	4749734.20	182.97	0	E	-81.0	4.1	26.3	0.0	0.0	0.0	-112.1
3294	641475.08	4749710.04	182.65	0	D	52.3	4.4	25.9	0.0	0.0	0.0	22.0
3294	641475.08	4749710.04	182.65	0	N	55.3	4.4	25.9	0.0	0.0	0.0	25.0
3294	641475.08	4749710.04	182.65	0	E	-81.0	4.4	25.9	0.0	0.0	0.0	-112.0
3300	641321.26	4749703.06	182.28	0	D	52.3	4.5	26.0	0.0	0.0	0.0	21.9
3300	641321.26	4749703.06	182.28	0	N	55.3	4.5	26.0	0.0	0.0	0.0	24.9
3300	641321.26	4749703.06	182.28	0	E	-81.0	4.5	26.0	0.0	0.0	0.0	-112.2
3305	641507.12	4749711.48	182.91	0	D	52.3	4.5	25.9	0.0	0.0	0.0	21.9
3305	641507.12	4749711.48	182.91	0	N	55.3	4.5	25.9	0.0	0.0	0.0	25.0
3305	641507.12	4749711.48	182.91	0	E	-81.0	4.5	25.9	0.0	0.0	0.0	-112.1
3342	641873.55	4749732.13	183.06	0	D	52.3	4.1	26.7	0.0	0.0	0.0	21.5

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3342	641873.55	4749732.13	183.06	0	N	55.3	4.1	26.7	0.0	0.0	0.0	24.5
3342	641873.55	4749732.13	183.06	0	E	-81.0	4.1	26.7	0.0	0.0	0.0	-112.6
3348	641673.70	4749720.80	182.91	0	D	52.3	4.9	25.8	0.0	0.0	0.0	21.7
3348	641673.70	4749720.80	182.91	0	N	55.3	4.9	25.8	0.0	0.0	0.0	24.7
3348	641673.70	4749720.80	182.91	0	E	-81.0	4.9	25.8	0.0	0.0	0.0	-112.4
3354	642174.05	4749745.66	181.65	0	D	52.3	4.0	27.0	0.0	0.0	0.0	21.3
3354	642174.05	4749745.66	181.65	0	N	55.3	4.0	27.0	0.0	0.0	0.0	24.3
3354	642174.05	4749745.66	181.65	0	E	-81.0	4.0	27.0	0.0	0.0	0.0	-112.8
3358	641976.68	4749736.84	183.01	0	D	52.3	4.0	27.0	0.0	0.0	0.0	21.4
3358	641976.68	4749736.84	183.01	0	N	55.3	4.0	27.0	0.0	0.0	0.0	24.4
3358	641976.68	4749736.84	183.01	0	E	-81.0	4.0	27.0	0.0	0.0	0.0	-112.7
3363	641480.82	4749710.32	182.65	0	D	52.3	4.4	26.6	0.0	0.0	0.0	21.3
3363	641480.82	4749710.32	182.65	0	N	55.3	4.4	26.6	0.0	0.0	0.0	24.3
3363	641480.82	4749710.32	182.65	0	E	-81.0	4.4	26.6	0.0	0.0	0.0	-112.8
3369	641097.30	4749693.07	182.04	0	D	52.3	4.3	27.2	0.0	0.0	0.0	20.8
3369	641097.30	4749693.07	182.04	0	N	55.3	4.3	27.2	0.0	0.0	0.0	23.8
3369	641097.30	4749693.07	182.04	0	E	-81.0	4.3	27.2	0.0	0.0	0.0	-113.2
3373	641377.89	4749705.62	182.49	0	D	52.3	4.4	26.9	0.0	0.0	0.0	21.0
3373	641377.89	4749705.62	182.49	0	N	55.3	4.4	26.9	0.0	0.0	0.0	24.0
3373	641377.89	4749705.62	182.49	0	E	-81.0	4.4	26.9	0.0	0.0	0.0	-113.1
3385	641903.33	4749733.52	182.98	0	D	52.3	4.1	27.3	0.0	0.0	0.0	20.9
3385	641903.33	4749733.52	182.98	0	N	55.3	4.1	27.3	0.0	0.0	0.0	23.9
3385	641903.33	4749733.52	182.98	0	E	-81.0	4.1	27.3	0.0	0.0	0.0	-113.2
3391	641300.63	4749702.10	182.27	0	D	52.3	4.4	27.1	0.0	0.0	0.0	20.9
3391	641300.63	4749702.10	182.27	0	N	55.3	4.4	27.1	0.0	0.0	0.0	23.9
3391	641300.63	4749702.10	182.27	0	E	-81.0	4.4	27.1	0.0	0.0	0.0	-113.2
3396	641398.16	4749706.58	182.56	0	D	52.3	4.4	27.0	0.0	0.0	0.0	20.9
3396	641398.16	4749706.58	182.56	0	N	55.3	4.4	27.0	0.0	0.0	0.0	23.9
3396	641398.16	4749706.58	182.56	0	E	-81.0	4.4	27.0	0.0	0.0	0.0	-113.2
3406	641509.57	4749711.59	182.92	0	D	52.3	4.5	27.1	0.0	0.0	0.0	20.7
3406	641509.57	4749711.59	182.92	0	N	55.3	4.5	27.1	0.0	0.0	0.0	23.7
3406	641509.57	4749711.59	182.92	0	E	-81.0	4.5	27.1	0.0	0.0	0.0	-113.4
3512	641340.97	4749703.94	182.29	0	D	52.3	4.5	27.3	0.0	0.0	0.0	20.5
3512	641340.97	4749703.94	182.29	0	N	55.3	4.5	27.3	0.0	0.0	0.0	23.5
3512	641340.97	4749703.94	182.29	0	E	-81.0	4.5	27.3	0.0	0.0	0.0	-113.6
3518	641405.34	4749706.90	182.62	0	D	52.3	4.5	27.2	0.0	0.0	0.0	20.5
3518	641405.34	4749706.90	182.62	0	N	55.3	4.5	27.2	0.0	0.0	0.0	23.6
3518	641405.34	4749706.90	182.62	0	E	-81.0	4.5	27.2	0.0	0.0	0.0	-113.5
3527	641467.55	4749709.68	182.65	0	D	52.3	4.4	27.8	0.0	0.0	0.0	20.1
3527	641467.55	4749709.68	182.65	0	N	55.3	4.4	27.8	0.0	0.0	0.0	23.1
3527	641467.55	4749709.68	182.65	0	E	-81.0	4.4	27.8	0.0	0.0	0.0	-114.0
3532	641863.33	4749731.65	183.00	0	D	52.3	4.1	28.4	0.0	0.0	0.0	19.9
3532	641863.33	4749731.65	183.00	0	N	55.3	4.1	28.4	0.0	0.0	0.0	22.9
3532	641863.33	4749731.65	183.00	0	E	-81.0	4.1	28.4	0.0	0.0	0.0	-114.2
3559	641244.21	4749699.64	181.65	0	D	52.3	4.6	28.2	0.0	0.0	0.0	19.5
3559	641244.21	4749699.64	181.65	0	N	55.3	4.6	28.2	0.0	0.0	0.0	22.5
3559	641244.21	4749699.64	181.65	0	E	-81.0	4.6	28.2	0.0	0.0	0.0	-114.6
3569	641283.29	4749701.28	182.26	0	D	52.3	4.4	28.5	0.0	0.0	0.0	19.5
3569	641283.29	4749701.28	182.26	0	N	55.3	4.4	28.5	0.0	0.0	0.0	22.5
3569	641283.29	4749701.28	182.26	0	E	-81.0	4.4	28.5	0.0	0.0	0.0	-114.6
3575	641471.52	4749709.87	182.65	0	D	52.3	4.4	28.4	0.0	0.0	0.0	19.5
3575	641471.52	4749709.87	182.65	0	N	55.3	4.4	28.4	0.0	0.0	0.0	22.5
3575	641471.52	4749709.87	182.65	0	E	-81.0	4.4	28.4	0.0	0.0	0.0	-114.6
3580	641457.91	4749709.22	182.65	0	D	52.3	4.4	28.5	0.0	0.0	0.0	19.4
3580	641457.91	4749709.22	182.65	0	N	55.3	4.4	28.5	0.0	0.0	0.0	22.4
3580	641457.91	4749709.22	182.65	0	E	-81.0	4.4	28.5	0.0	0.0	0.0	-114.7
3592	641454.92	4749709.07	182.65	0	D	52.3	4.4	28.7	0.0	0.0	0.0	19.2
3592	641454.92	4749709.07	182.65	0	N	55.3	4.4	28.7	0.0	0.0	0.0	22.2
3592	641454.92	4749709.07	182.65	0	E	-81.0	4.4	28.7	0.0	0.0	0.0	-114.8
3597	642013.56	4749738.45	183.29	0	D	52.3	4.0	29.2	0.0	0.0	0.0	19.1
3597	642013.56	4749738.45	183.29	0	N	55.3	4.0	29.2	0.0	0.0	0.0	22.1
3597	642013.56	4749738.45	183.29	0	E	-81.0	4.0	29.2	0.0	0.0	0.0	-115.0
3608	641852.80	4749731.17	182.94	0	D	52.3	4.1	29.1	0.0	0.0	0.0	19.1

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3608	641852.80	4749731.17	182.94	0	N	55.3	4.1	29.1	0.0	0.0	0.0	22.1
3608	641852.80	4749731.17	182.94	0	E	-81.0	4.1	29.1	0.0	0.0	0.0	-114.9
3615	641436.63	4749708.24	182.65	0	D	52.3	4.5	28.9	0.0	0.0	0.0	18.9
3615	641436.63	4749708.24	182.65	0	N	55.3	4.5	28.9	0.0	0.0	0.0	21.9
3615	641436.63	4749708.24	182.65	0	E	-81.0	4.5	28.9	0.0	0.0	0.0	-115.2
3620	641128.62	4749694.50	182.22	0	D	52.3	4.7	28.8	0.0	0.0	0.0	18.8
3620	641128.62	4749694.50	182.22	0	N	55.3	4.7	28.8	0.0	0.0	0.0	21.8
3620	641128.62	4749694.50	182.22	0	E	-81.0	4.7	28.8	0.0	0.0	0.0	-115.3
3627	641043.94	4749690.72	181.73	0	D	52.3	4.5	29.1	0.0	0.0	0.0	18.7
3627	641043.94	4749690.72	181.73	0	N	55.3	4.5	29.1	0.0	0.0	0.0	21.7
3627	641043.94	4749690.72	181.73	0	E	-81.0	4.5	29.1	0.0	0.0	0.0	-115.3
3632	641411.46	4749707.16	182.65	0	D	52.3	4.5	29.1	0.0	0.0	0.0	18.7
3632	641411.46	4749707.16	182.65	0	N	55.3	4.5	29.1	0.0	0.0	0.0	21.7
3632	641411.46	4749707.16	182.65	0	E	-81.0	4.5	29.1	0.0	0.0	0.0	-115.4
3639	641961.07	4749736.16	183.02	0	D	52.3	4.0	29.7	0.0	0.0	0.0	18.6
3639	641961.07	4749736.16	183.02	0	N	55.3	4.0	29.7	0.0	0.0	0.0	21.6
3639	641961.07	4749736.16	183.02	0	E	-81.0	4.0	29.7	0.0	0.0	0.0	-115.5
3660	641271.95	4749700.78	182.26	0	D	52.3	4.6	29.3	0.0	0.0	0.0	18.3
3660	641271.95	4749700.78	182.26	0	N	55.3	4.6	29.3	0.0	0.0	0.0	21.4
3660	641271.95	4749700.78	182.26	0	E	-81.0	4.6	29.3	0.0	0.0	0.0	-115.7
3674	641148.98	4749695.39	182.34	0	D	52.3	4.4	29.6	0.0	0.0	0.0	18.3
3674	641148.98	4749695.39	182.34	0	N	55.3	4.4	29.6	0.0	0.0	0.0	21.3
3674	641148.98	4749695.39	182.34	0	E	-81.0	4.4	29.6	0.0	0.0	0.0	-115.8
3685	642233.27	4749748.31	181.65	0	D	52.3	4.0	30.1	0.0	0.0	0.0	18.2
3685	642233.27	4749748.31	181.65	0	N	55.3	4.0	30.1	0.0	0.0	0.0	21.2
3685	642233.27	4749748.31	181.65	0	E	-81.0	4.0	30.1	0.0	0.0	0.0	-115.9
3758	641478.20	4749710.19	182.65	0	D	52.3	4.4	29.8	0.0	0.0	0.0	18.1
3758	641478.20	4749710.19	182.65	0	N	55.3	4.4	29.8	0.0	0.0	0.0	21.1
3758	641478.20	4749710.19	182.65	0	E	-81.0	4.4	29.8	0.0	0.0	0.0	-116.0
3763	641857.65	4749731.39	182.94	0	D	52.3	4.1	30.3	0.0	0.0	0.0	17.9
3763	641857.65	4749731.39	182.94	0	N	55.3	4.1	30.3	0.0	0.0	0.0	20.9
3763	641857.65	4749731.39	182.94	0	E	-81.0	4.1	30.3	0.0	0.0	0.0	-116.2
3769	641446.89	4749708.70	182.65	0	D	52.3	4.5	30.1	0.0	0.0	0.0	17.7
3769	641446.89	4749708.70	182.65	0	N	55.3	4.5	30.1	0.0	0.0	0.0	20.7
3769	641446.89	4749708.70	182.65	0	E	-81.0	4.5	30.1	0.0	0.0	0.0	-116.3
3775	641421.84	4749707.61	182.65	0	D	52.3	4.5	30.2	0.0	0.0	0.0	17.6
3775	641421.84	4749707.61	182.65	0	N	55.3	4.5	30.2	0.0	0.0	0.0	20.6
3775	641421.84	4749707.61	182.65	0	E	-81.0	4.5	30.2	0.0	0.0	0.0	-116.5
3791	641416.61	4749707.38	182.65	0	D	52.3	4.5	30.2	0.0	0.0	0.0	17.6
3791	641416.61	4749707.38	182.65	0	N	55.3	4.5	30.2	0.0	0.0	0.0	20.6
3791	641416.61	4749707.38	182.65	0	E	-81.0	4.5	30.2	0.0	0.0	0.0	-116.5
3797	641426.40	4749707.80	182.65	0	D	52.3	4.5	30.3	0.0	0.0	0.0	17.5
3797	641426.40	4749707.80	182.65	0	N	55.3	4.5	30.3	0.0	0.0	0.0	20.5
3797	641426.40	4749707.80	182.65	0	E	-81.0	4.5	30.3	0.0	0.0	0.0	-116.6
3803	642040.60	4749739.66	183.28	0	D	52.3	4.0	31.0	0.0	0.0	0.0	17.3
3803	642040.60	4749739.66	183.28	0	N	55.3	4.0	31.0	0.0	0.0	0.0	20.3
3803	642040.60	4749739.66	183.28	0	E	-81.0	4.0	31.0	0.0	0.0	0.0	-116.8
3814	641189.30	4749697.21	182.03	0	D	52.3	4.7	29.7	0.0	0.0	0.0	17.9
3814	641189.30	4749697.21	182.03	0	N	55.3	4.7	29.7	0.0	0.0	0.0	20.9
3814	641189.30	4749697.21	182.03	0	E	-81.0	4.7	29.7	0.0	0.0	0.0	-116.2
3819	641212.35	4749698.19	181.65	0	D	52.3	4.2	30.8	0.0	0.0	0.0	17.3
3819	641212.35	4749698.19	181.65	0	N	55.3	4.2	30.8	0.0	0.0	0.0	20.3
3819	641212.35	4749698.19	181.65	0	E	-81.0	4.2	30.8	0.0	0.0	0.0	-116.8
3824	641465.11	4749709.56	182.65	0	D	52.3	4.4	30.6	0.0	0.0	0.0	17.3
3824	641465.11	4749709.56	182.65	0	N	55.3	4.4	30.6	0.0	0.0	0.0	20.3
3824	641465.11	4749709.56	182.65	0	E	-81.0	4.4	30.6	0.0	0.0	0.0	-116.8
3830	641881.32	4749732.49	183.08	0	D	52.3	4.1	31.0	0.0	0.0	0.0	17.3
3830	641881.32	4749732.49	183.08	0	N	55.3	4.1	31.0	0.0	0.0	0.0	20.3
3830	641881.32	4749732.49	183.08	0	E	-81.0	4.1	31.0	0.0	0.0	0.0	-116.8
3836	641369.66	4749705.23	182.47	0	D	52.3	4.5	30.6	0.0	0.0	0.0	17.3
3836	641369.66	4749705.23	182.47	0	N	55.3	4.5	30.6	0.0	0.0	0.0	20.3
3836	641369.66	4749705.23	182.47	0	E	-81.0	4.5	30.6	0.0	0.0	0.0	-116.8
3839	641463.39	4749709.48	182.65	0	D	52.3	4.4	30.6	0.0	0.0	0.0	17.2

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3839	641463.39	4749709.48	182.65	0	N	55.3	4.4	30.6	0.0	0.0	0.0	20.2
3839	641463.39	4749709.48	182.65	0	E	-81.0	4.4	30.6	0.0	0.0	0.0	-116.8
3843	641894.98	4749733.13	183.00	0	D	52.3	4.1	31.1	0.0	0.0	0.0	17.1
3843	641894.98	4749733.13	183.00	0	N	55.3	4.1	31.1	0.0	0.0	0.0	20.1
3843	641894.98	4749733.13	183.00	0	E	-81.0	4.1	31.1	0.0	0.0	0.0	-116.9
3849	641940.38	4749735.25	182.94	0	D	52.3	4.0	31.3	0.0	0.0	0.0	17.1
3849	641940.38	4749735.25	182.94	0	N	55.3	4.0	31.3	0.0	0.0	0.0	20.1
3849	641940.38	4749735.25	182.94	0	E	-81.0	4.0	31.3	0.0	0.0	0.0	-117.0
3858	641667.64	4749719.79	182.87	0	D	52.3	4.9	30.4	0.0	0.0	0.0	17.1
3858	641667.64	4749719.79	182.87	0	N	55.3	4.9	30.4	0.0	0.0	0.0	20.1
3858	641667.64	4749719.79	182.87	0	E	-81.0	4.9	30.4	0.0	0.0	0.0	-117.0
3864	641068.08	4749691.74	181.87	0	D	52.3	4.9	30.6	0.0	0.0	0.0	16.9
3864	641068.08	4749691.74	181.87	0	N	55.3	4.9	30.6	0.0	0.0	0.0	19.9
3864	641068.08	4749691.74	181.87	0	E	-81.0	4.9	30.6	0.0	0.0	0.0	-117.2
3870	642129.55	4749743.66	182.06	0	D	52.3	4.0	30.5	0.0	0.0	0.0	17.8
3870	642129.55	4749743.66	182.06	0	N	55.3	4.0	30.5	0.0	0.0	0.0	20.8
3870	642129.55	4749743.66	182.06	0	E	-81.0	4.0	30.5	0.0	0.0	0.0	-116.2
3881	641928.87	4749734.72	182.94	0	D	52.3	4.1	31.5	0.0	0.0	0.0	16.8
3881	641928.87	4749734.72	182.94	0	N	55.3	4.1	31.5	0.0	0.0	0.0	19.8
3881	641928.87	4749734.72	182.94	0	E	-81.0	4.1	31.5	0.0	0.0	0.0	-117.3
3886	642208.60	4749747.21	181.65	0	D	52.3	4.0	31.7	0.0	0.0	0.0	16.6
3886	642208.60	4749747.21	181.65	0	N	55.3	4.0	31.7	0.0	0.0	0.0	19.6
3886	642208.60	4749747.21	181.65	0	E	-81.0	4.0	31.7	0.0	0.0	0.0	-117.4
3892	641442.83	4749708.52	182.65	0	D	52.3	4.5	31.1	0.0	0.0	0.0	16.7
3892	641442.83	4749708.52	182.65	0	N	55.3	4.5	31.1	0.0	0.0	0.0	19.7
3892	641442.83	4749708.52	182.65	0	E	-81.0	4.5	31.1	0.0	0.0	0.0	-117.3
3898	642081.18	4749741.49	182.84	0	D	52.3	4.0	31.4	0.0	0.0	0.0	16.9
3898	642081.18	4749741.49	182.84	0	N	55.3	4.0	31.4	0.0	0.0	0.0	19.9
3898	642081.18	4749741.49	182.84	0	E	-81.0	4.0	31.4	0.0	0.0	0.0	-117.2
3910	641889.00	4749732.85	183.04	0	D	52.3	4.1	31.7	0.0	0.0	0.0	16.6
3910	641889.00	4749732.85	183.04	0	N	55.3	4.1	31.7	0.0	0.0	0.0	19.6
3910	641889.00	4749732.85	183.04	0	E	-81.0	4.1	31.7	0.0	0.0	0.0	-117.5
3915	641011.34	4749689.28	181.65	0	D	52.3	4.6	31.4	0.0	0.0	0.0	16.3
3915	641011.34	4749689.28	181.65	0	N	55.3	4.6	31.4	0.0	0.0	0.0	19.3
3915	641011.34	4749689.28	181.65	0	E	-81.0	4.6	31.4	0.0	0.0	0.0	-117.7
3919	641696.34	4749723.79	182.94	0	D	52.3	4.4	31.5	0.0	0.0	0.0	16.4
3919	641696.34	4749723.79	182.94	0	N	55.3	4.4	31.5	0.0	0.0	0.0	19.4
3919	641696.34	4749723.79	182.94	0	E	-81.0	4.4	31.5	0.0	0.0	0.0	-117.7
3931	641483.94	4749710.47	182.65	0	D	52.3	4.4	31.7	0.0	0.0	0.0	16.2
3931	641483.94	4749710.47	182.65	0	N	55.3	4.4	31.7	0.0	0.0	0.0	19.2
3931	641483.94	4749710.47	182.65	0	E	-81.0	4.4	31.7	0.0	0.0	0.0	-117.9
3937	641885.28	4749732.68	183.09	0	D	52.3	4.1	32.1	0.0	0.0	0.0	16.1
3937	641885.28	4749732.68	183.09	0	N	55.3	4.1	32.1	0.0	0.0	0.0	19.1
3937	641885.28	4749732.68	183.09	0	E	-81.0	4.1	32.1	0.0	0.0	0.0	-117.9
4045	642263.53	4749749.67	181.65	0	D	52.3	4.0	32.4	0.0	0.0	0.0	15.9
4045	642263.53	4749749.67	181.65	0	N	55.3	4.0	32.4	0.0	0.0	0.0	18.9
4045	642263.53	4749749.67	181.65	0	E	-81.0	4.0	32.4	0.0	0.0	0.0	-118.2
4052	641451.32	4749708.90	182.65	0	D	52.3	4.5	31.8	0.0	0.0	0.0	16.0
4052	641451.32	4749708.90	182.65	0	N	55.3	4.5	31.8	0.0	0.0	0.0	19.0
4052	641451.32	4749708.90	182.65	0	E	-81.0	4.5	31.8	0.0	0.0	0.0	-118.1
4059	641449.84	4749708.84	182.65	0	D	52.3	4.5	31.9	0.0	0.0	0.0	15.9
4059	641449.84	4749708.84	182.65	0	N	55.3	4.5	31.9	0.0	0.0	0.0	18.9
4059	641449.84	4749708.84	182.65	0	E	-81.0	4.5	31.9	0.0	0.0	0.0	-118.2
4066	640980.79	4749687.93	181.65	0	D	52.3	4.5	32.0	0.0	0.0	0.0	15.8
4066	640980.79	4749687.93	181.65	0	N	55.3	4.5	32.0	0.0	0.0	0.0	18.8
4066	640980.79	4749687.93	181.65	0	E	-81.0	4.5	32.0	0.0	0.0	0.0	-118.3
4081	641490.15	4749710.74	182.65	0	D	52.3	4.5	32.0	0.0	0.0	0.0	15.8
4081	641490.15	4749710.74	182.65	0	N	55.3	4.5	32.0	0.0	0.0	0.0	18.8
4081	641490.15	4749710.74	182.65	0	E	-81.0	4.5	32.0	0.0	0.0	0.0	-118.3
4089	641491.02	4749710.78	182.65	0	D	52.3	4.5	32.1	0.0	0.0	0.0	15.8
4089	641491.02	4749710.78	182.65	0	N	55.3	4.5	32.1	0.0	0.0	0.0	18.8
4089	641491.02	4749710.78	182.65	0	E	-81.0	4.5	32.1	0.0	0.0	0.0	-118.3
4097	642143.14	4749744.27	181.65	0	D	52.3	4.0	32.7	0.0	0.0	0.0	15.6

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4097	642143.14	4749744.27	181.65	0	N	55.3	4.0	32.7	0.0	0.0	0.0	18.6
4097	642143.14	4749744.27	181.65	0	E	-81.0	4.0	32.7	0.0	0.0	0.0	-118.5
4103	641452.74	4749708.97	182.65	0	D	52.3	4.4	32.3	0.0	0.0	0.0	15.6
4103	641452.74	4749708.97	182.65	0	N	55.3	4.4	32.3	0.0	0.0	0.0	18.6
4103	641452.74	4749708.97	182.65	0	E	-81.0	4.4	32.3	0.0	0.0	0.0	-118.4
4111	641310.52	4749702.57	182.26	0	D	52.3	4.4	32.3	0.0	0.0	0.0	15.6
4111	641310.52	4749702.57	182.26	0	N	55.3	4.4	32.3	0.0	0.0	0.0	18.6
4111	641310.52	4749702.57	182.26	0	E	-81.0	4.4	32.3	0.0	0.0	0.0	-118.5
4119	642002.80	4749737.98	183.24	0	D	52.3	4.0	32.8	0.0	0.0	0.0	15.5
4119	642002.80	4749737.98	183.24	0	N	55.3	4.0	32.8	0.0	0.0	0.0	18.5
4119	642002.80	4749737.98	183.24	0	E	-81.0	4.0	32.8	0.0	0.0	0.0	-118.6
4134	641469.67	4749709.78	182.65	0	D	52.3	4.4	32.4	0.0	0.0	0.0	15.5
4134	641469.67	4749709.78	182.65	0	N	55.3	4.4	32.4	0.0	0.0	0.0	18.5
4134	641469.67	4749709.78	182.65	0	E	-81.0	4.4	32.4	0.0	0.0	0.0	-118.6
4142	641995.10	4749737.65	183.16	0	D	52.3	4.0	32.9	0.0	0.0	0.0	15.4
4142	641995.10	4749737.65	183.16	0	N	55.3	4.0	32.9	0.0	0.0	0.0	18.4
4142	641995.10	4749737.65	183.16	0	E	-81.0	4.0	32.9	0.0	0.0	0.0	-118.7
4149	641459.99	4749709.32	182.65	0	D	52.3	4.4	32.5	0.0	0.0	0.0	15.4
4149	641459.99	4749709.32	182.65	0	N	55.3	4.4	32.5	0.0	0.0	0.0	18.4
4149	641459.99	4749709.32	182.65	0	E	-81.0	4.4	32.5	0.0	0.0	0.0	-118.7
4155	641933.64	4749734.94	182.92	0	D	52.3	4.1	32.9	0.0	0.0	0.0	15.3
4155	641933.64	4749734.94	182.92	0	N	55.3	4.1	32.9	0.0	0.0	0.0	18.3
4155	641933.64	4749734.94	182.92	0	E	-81.0	4.1	32.9	0.0	0.0	0.0	-118.8
4171	641482.99	4749710.42	182.65	0	D	52.3	4.4	32.7	0.0	0.0	0.0	15.2
4171	641482.99	4749710.42	182.65	0	N	55.3	4.4	32.7	0.0	0.0	0.0	18.2
4171	641482.99	4749710.42	182.65	0	E	-81.0	4.4	32.7	0.0	0.0	0.0	-118.9
4178	641440.16	4749708.40	182.65	0	D	52.3	4.5	32.7	0.0	0.0	0.0	15.1
4178	641440.16	4749708.40	182.65	0	N	55.3	4.5	32.7	0.0	0.0	0.0	18.1
4178	641440.16	4749708.40	182.65	0	E	-81.0	4.5	32.7	0.0	0.0	0.0	-118.9
4186	641945.61	4749735.48	182.95	0	D	52.3	4.0	33.3	0.0	0.0	0.0	15.1
4186	641945.61	4749735.48	182.95	0	N	55.3	4.0	33.3	0.0	0.0	0.0	18.1
4186	641945.61	4749735.48	182.95	0	E	-81.0	4.0	33.3	0.0	0.0	0.0	-119.0
4194	641433.90	4749708.12	182.65	0	D	52.3	4.5	32.7	0.0	0.0	0.0	15.1
4194	641433.90	4749708.12	182.65	0	N	55.3	4.5	32.7	0.0	0.0	0.0	18.1
4194	641433.90	4749708.12	182.65	0	E	-81.0	4.5	32.7	0.0	0.0	0.0	-119.0
4202	641445.09	4749708.62	182.65	0	D	52.3	4.5	32.8	0.0	0.0	0.0	15.0
4202	641445.09	4749708.62	182.65	0	N	55.3	4.5	32.8	0.0	0.0	0.0	18.0
4202	641445.09	4749708.62	182.65	0	E	-81.0	4.5	32.8	0.0	0.0	0.0	-119.1
4213	642054.23	4749740.28	183.26	0	D	52.3	4.0	33.4	0.0	0.0	0.0	14.9
4213	642054.23	4749740.28	183.26	0	N	55.3	4.0	33.4	0.0	0.0	0.0	17.9
4213	642054.23	4749740.28	183.26	0	E	-81.0	4.0	33.4	0.0	0.0	0.0	-119.2
4220	642068.35	4749740.91	183.15	0	D	52.3	4.0	33.1	0.0	0.0	0.0	15.1
4220	642068.35	4749740.91	183.15	0	N	55.3	4.0	33.1	0.0	0.0	0.0	18.2
4220	642068.35	4749740.91	183.15	0	E	-81.0	4.0	33.1	0.0	0.0	0.0	-118.9
4227	641254.46	4749700.06	181.65	0	D	52.3	4.6	32.8	0.0	0.0	0.0	14.9
4227	641254.46	4749700.06	181.65	0	N	55.3	4.6	32.8	0.0	0.0	0.0	17.9
4227	641254.46	4749700.06	181.65	0	E	-81.0	4.6	32.8	0.0	0.0	0.0	-119.2
4243	641989.67	4749737.41	183.07	0	D	52.3	4.0	33.5	0.0	0.0	0.0	14.8
4243	641989.67	4749737.41	183.07	0	N	55.3	4.0	33.5	0.0	0.0	0.0	17.8
4243	641989.67	4749737.41	183.07	0	E	-81.0	4.0	33.5	0.0	0.0	0.0	-119.3
4251	641430.16	4749707.96	182.65	0	D	52.3	4.5	33.1	0.0	0.0	0.0	14.7
4251	641430.16	4749707.96	182.65	0	N	55.3	4.5	33.1	0.0	0.0	0.0	17.7
4251	641430.16	4749707.96	182.65	0	E	-81.0	4.5	33.1	0.0	0.0	0.0	-119.4
4266	641233.92	4749699.22	181.65	0	D	52.3	4.6	33.2	0.0	0.0	0.0	14.5
4266	641233.92	4749699.22	181.65	0	N	55.3	4.6	33.2	0.0	0.0	0.0	17.5
4266	641233.92	4749699.22	181.65	0	E	-81.0	4.6	33.2	0.0	0.0	0.0	-119.6
4274	641448.57	4749708.78	182.65	0	D	52.3	4.5	33.5	0.0	0.0	0.0	14.3
4274	641448.57	4749708.78	182.65	0	N	55.3	4.5	33.5	0.0	0.0	0.0	17.4
4274	641448.57	4749708.78	182.65	0	E	-81.0	4.5	33.5	0.0	0.0	0.0	-119.7
4288	641264.78	4749700.48	181.96	0	D	52.3	4.6	31.4	0.0	0.0	0.0	16.3
4288	641264.78	4749700.48	181.96	0	N	55.3	4.6	31.4	0.0	0.0	0.0	19.3
4288	641264.78	4749700.48	181.96	0	E	-81.0	4.6	31.4	0.0	0.0	0.0	-117.8
4303	640920.06	4749685.09	181.65	0	D	52.3	4.3	34.0	0.0	0.0	0.0	14.0

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4303	640920.06	4749685.09	181.65	0	N	55.3	4.3	34.0	0.0	0.0	0.0	17.0
4303	640920.06	4749685.09	181.65	0	E	-81.0	4.3	34.0	0.0	0.0	0.0	-120.0
4311	640904.65	4749684.41	181.65	0	D	52.3	4.7	33.6	0.0	0.0	0.0	14.0
4311	640904.65	4749684.41	181.65	0	N	55.3	4.7	33.6	0.0	0.0	0.0	17.0
4311	640904.65	4749684.41	181.65	0	E	-81.0	4.7	33.6	0.0	0.0	0.0	-120.1
4320	641291.21	4749701.66	182.27	0	D	52.3	4.4	33.8	0.0	0.0	0.0	14.1
4320	641291.21	4749701.66	182.27	0	N	55.3	4.4	33.8	0.0	0.0	0.0	17.1
4320	641291.21	4749701.66	182.27	0	E	-81.0	4.4	33.8	0.0	0.0	0.0	-120.0
4325	641414.20	4749707.28	182.65	0	D	52.3	4.5	33.7	0.0	0.0	0.0	14.1
4325	641414.20	4749707.28	182.65	0	N	55.3	4.5	33.7	0.0	0.0	0.0	17.1
4325	641414.20	4749707.28	182.65	0	E	-81.0	4.5	33.7	0.0	0.0	0.0	-120.0
4334	641260.72	4749700.32	181.65	0	D	52.3	4.6	33.7	0.0	0.0	0.0	14.0
4334	641260.72	4749700.32	181.65	0	N	55.3	4.6	33.7	0.0	0.0	0.0	17.0
4334	641260.72	4749700.32	181.65	0	E	-81.0	4.6	33.7	0.0	0.0	0.0	-120.1
4341	641703.87	4749724.38	182.88	0	D	52.3	4.2	34.1	0.0	0.0	0.0	14.0
4341	641703.87	4749724.38	182.88	0	N	55.3	4.2	34.1	0.0	0.0	0.0	17.0
4341	641703.87	4749724.38	182.88	0	E	-81.0	4.2	34.1	0.0	0.0	0.0	-120.1
4346	641461.44	4749709.39	182.65	0	D	52.3	4.4	34.0	0.0	0.0	0.0	13.9
4346	641461.44	4749709.39	182.65	0	N	55.3	4.4	34.0	0.0	0.0	0.0	16.9
4346	641461.44	4749709.39	182.65	0	E	-81.0	4.4	34.0	0.0	0.0	0.0	-120.2
4354	641224.32	4749698.80	181.65	0	D	52.3	4.2	34.2	0.0	0.0	0.0	13.9
4354	641224.32	4749698.80	181.65	0	N	55.3	4.2	34.2	0.0	0.0	0.0	16.9
4354	641224.32	4749698.80	181.65	0	E	-81.0	4.2	34.2	0.0	0.0	0.0	-120.2
4368	641332.36	4749703.56	182.29	0	D	52.3	4.5	34.1	0.0	0.0	0.0	13.7
4368	641332.36	4749703.56	182.29	0	N	55.3	4.5	34.1	0.0	0.0	0.0	16.7
4368	641332.36	4749703.56	182.29	0	E	-81.0	4.5	34.1	0.0	0.0	0.0	-120.4
4376	641428.30	4749707.88	182.65	0	D	52.3	4.5	34.1	0.0	0.0	0.0	13.7
4376	641428.30	4749707.88	182.65	0	N	55.3	4.5	34.1	0.0	0.0	0.0	16.7
4376	641428.30	4749707.88	182.65	0	E	-81.0	4.5	34.1	0.0	0.0	0.0	-120.4
4383	640758.13	4749681.93	182.17	0	D	52.3	3.1	35.6	0.0	0.0	0.0	13.6
4383	640758.13	4749681.93	182.17	0	N	55.3	3.1	35.6	0.0	0.0	0.0	16.6
4383	640758.13	4749681.93	182.17	0	E	-81.0	3.1	35.6	0.0	0.0	0.0	-120.5
4391	641432.65	4749708.07	182.65	0	D	52.3	4.5	34.2	0.0	0.0	0.0	13.6
4391	641432.65	4749708.07	182.65	0	N	55.3	4.5	34.2	0.0	0.0	0.0	16.6
4391	641432.65	4749708.07	182.65	0	E	-81.0	4.5	34.2	0.0	0.0	0.0	-120.4
4399	641419.80	4749707.52	182.65	0	D	52.3	4.5	34.2	0.0	0.0	0.0	13.6
4399	641419.80	4749707.52	182.65	0	N	55.3	4.5	34.2	0.0	0.0	0.0	16.6
4399	641419.80	4749707.52	182.65	0	E	-81.0	4.5	34.2	0.0	0.0	0.0	-120.5
4406	642023.39	4749738.89	183.29	0	D	52.3	4.0	34.8	0.0	0.0	0.0	13.5
4406	642023.39	4749738.89	183.29	0	N	55.3	4.0	34.8	0.0	0.0	0.0	16.5
4406	642023.39	4749738.89	183.29	0	E	-81.0	4.0	34.8	0.0	0.0	0.0	-120.6
4428	641167.43	4749696.26	182.41	0	D	52.3	4.4	34.6	0.0	0.0	0.0	13.4
4428	641167.43	4749696.26	182.41	0	N	55.3	4.4	34.6	0.0	0.0	0.0	16.4
4428	641167.43	4749696.26	182.41	0	E	-81.0	4.4	34.6	0.0	0.0	0.0	-120.7
4442	641954.54	4749735.87	183.03	0	D	52.3	4.0	35.1	0.0	0.0	0.0	13.3
4442	641954.54	4749735.87	183.03	0	N	55.3	4.0	35.1	0.0	0.0	0.0	16.3
4442	641954.54	4749735.87	183.03	0	E	-81.0	4.0	35.1	0.0	0.0	0.0	-120.8
4449	641423.83	4749707.69	182.65	0	D	52.3	4.5	34.5	0.0	0.0	0.0	13.3
4449	641423.83	4749707.69	182.65	0	N	55.3	4.5	34.5	0.0	0.0	0.0	16.3
4449	641423.83	4749707.69	182.65	0	E	-81.0	4.5	34.5	0.0	0.0	0.0	-120.8
4456	641418.67	4749707.47	182.65	0	D	52.3	4.5	34.6	0.0	0.0	0.0	13.2
4456	641418.67	4749707.47	182.65	0	N	55.3	4.5	34.6	0.0	0.0	0.0	16.2
4456	641418.67	4749707.47	182.65	0	E	-81.0	4.5	34.6	0.0	0.0	0.0	-120.9
4463	641949.04	4749735.63	182.98	0	D	52.3	4.0	35.2	0.0	0.0	0.0	13.2
4463	641949.04	4749735.63	182.98	0	N	55.3	4.0	35.2	0.0	0.0	0.0	16.2
4463	641949.04	4749735.63	182.98	0	E	-81.0	4.0	35.2	0.0	0.0	0.0	-120.9
4478	641462.19	4749709.42	182.65	0	D	52.3	4.4	34.8	0.0	0.0	0.0	13.1
4478	641462.19	4749709.42	182.65	0	N	55.3	4.4	34.8	0.0	0.0	0.0	16.1
4478	641462.19	4749709.42	182.65	0	E	-81.0	4.4	34.8	0.0	0.0	0.0	-121.0
4493	641951.75	4749735.75	183.01	0	D	52.3	4.0	35.3	0.0	0.0	0.0	13.1
4493	641951.75	4749735.75	183.01	0	N	55.3	4.0	35.3	0.0	0.0	0.0	16.1
4493	641951.75	4749735.75	183.01	0	E	-81.0	4.0	35.3	0.0	0.0	0.0	-121.0
4512	641204.72	4749697.82	181.65	0	D	52.3	4.7	34.6	0.0	0.0	0.0	13.0

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4512	641204.72	4749697.82	181.65	0	N	55.3	4.7	34.6	0.0	0.0	0.0	16.0
4512	641204.72	4749697.82	181.65	0	E	-81.0	4.7	34.6	0.0	0.0	0.0	-121.0
4686	642048.53	4749740.02	183.27	0	D	52.3	4.0	35.3	0.0	0.0	0.0	13.0
4686	642048.53	4749740.02	183.27	0	N	55.3	4.0	35.3	0.0	0.0	0.0	16.0
4686	642048.53	4749740.02	183.27	0	E	-81.0	4.0	35.3	0.0	0.0	0.0	-121.1
4691	641366.77	4749705.10	182.46	0	D	52.3	4.5	35.0	0.0	0.0	0.0	12.9
4691	641366.77	4749705.10	182.46	0	N	55.3	4.5	35.0	0.0	0.0	0.0	15.9
4691	641366.77	4749705.10	182.46	0	E	-81.0	4.5	35.0	0.0	0.0	0.0	-121.2
4698	641372.50	4749705.36	182.47	0	D	52.3	4.4	35.0	0.0	0.0	0.0	12.9
4698	641372.50	4749705.36	182.47	0	N	55.3	4.4	35.0	0.0	0.0	0.0	15.9
4698	641372.50	4749705.36	182.47	0	E	-81.0	4.4	35.0	0.0	0.0	0.0	-121.2
4723	640954.59	4749686.73	181.65	0	D	52.3	4.3	35.3	0.0	0.0	0.0	12.8
4723	640954.59	4749686.73	181.65	0	N	55.3	4.3	35.3	0.0	0.0	0.0	15.8
4723	640954.59	4749686.73	181.65	0	E	-81.0	4.3	35.3	0.0	0.0	0.0	-121.3
4730	641334.53	4749703.66	182.30	0	D	52.3	4.5	35.1	0.0	0.0	0.0	12.8
4730	641334.53	4749703.66	182.30	0	N	55.3	4.5	35.1	0.0	0.0	0.0	15.8
4730	641334.53	4749703.66	182.30	0	E	-81.0	4.5	35.1	0.0	0.0	0.0	-121.3
4737	642278.09	4749750.32	181.65	0	D	52.3	4.0	35.7	0.0	0.0	0.0	12.6
4737	642278.09	4749750.32	181.65	0	N	55.3	4.0	35.7	0.0	0.0	0.0	15.6
4737	642278.09	4749750.32	181.65	0	E	-81.0	4.0	35.7	0.0	0.0	0.0	-121.5
4743	640939.22	4749686.00	181.65	0	D	52.3	4.3	35.4	0.0	0.0	0.0	12.6
4743	640939.22	4749686.00	181.65	0	N	55.3	4.3	35.4	0.0	0.0	0.0	15.6
4743	640939.22	4749686.00	181.65	0	E	-81.0	4.3	35.4	0.0	0.0	0.0	-121.4
4750	641891.78	4749732.98	183.00	0	D	52.3	4.1	35.6	0.0	0.0	0.0	12.7
4750	641891.78	4749732.98	183.00	0	N	55.3	4.1	35.6	0.0	0.0	0.0	15.7
4750	641891.78	4749732.98	183.00	0	E	-81.0	4.1	35.6	0.0	0.0	0.0	-121.4
4758	641024.97	4749689.87	181.65	0	D	52.3	4.5	35.3	0.0	0.0	0.0	12.6
4758	641024.97	4749689.87	181.65	0	N	55.3	4.5	35.3	0.0	0.0	0.0	15.6
4758	641024.97	4749689.87	181.65	0	E	-81.0	4.5	35.3	0.0	0.0	0.0	-121.5
4780	642092.95	4749742.02	182.65	0	D	52.3	4.0	35.9	0.0	0.0	0.0	12.4
4780	642092.95	4749742.02	182.65	0	N	55.3	4.0	35.9	0.0	0.0	0.0	15.4
4780	642092.95	4749742.02	182.65	0	E	-81.0	4.0	35.9	0.0	0.0	0.0	-121.7
4786	641431.23	4749708.01	182.65	0	D	52.3	4.5	35.5	0.0	0.0	0.0	12.3
4786	641431.23	4749708.01	182.65	0	N	55.3	4.5	35.5	0.0	0.0	0.0	15.3
4786	641431.23	4749708.01	182.65	0	E	-81.0	4.5	35.5	0.0	0.0	0.0	-121.8
4800	641181.21	4749696.89	182.41	0	D	52.3	4.7	35.4	0.0	0.0	0.0	12.2
4800	641181.21	4749696.89	182.41	0	N	55.3	4.7	35.4	0.0	0.0	0.0	15.2
4800	641181.21	4749696.89	182.41	0	E	-81.0	4.7	35.4	0.0	0.0	0.0	-121.8
4812	641444.13	4749708.58	182.65	0	D	52.3	4.5	35.7	0.0	0.0	0.0	12.2
4812	641444.13	4749708.58	182.65	0	N	55.3	4.5	35.7	0.0	0.0	0.0	15.2
4812	641444.13	4749708.58	182.65	0	E	-81.0	4.5	35.7	0.0	0.0	0.0	-121.9
4818	642107.33	4749742.66	182.65	0	D	52.3	4.0	36.2	0.0	0.0	0.0	12.1
4818	642107.33	4749742.66	182.65	0	N	55.3	4.0	36.2	0.0	0.0	0.0	15.1
4818	642107.33	4749742.66	182.65	0	E	-81.0	4.0	36.2	0.0	0.0	0.0	-121.9
4824	642112.04	4749742.88	182.65	0	D	52.3	4.0	36.2	0.0	0.0	0.0	12.1
4824	642112.04	4749742.88	182.65	0	N	55.3	4.0	36.2	0.0	0.0	0.0	15.1
4824	642112.04	4749742.88	182.65	0	E	-81.0	4.0	36.2	0.0	0.0	0.0	-122.0
4831	642062.71	4749740.66	183.26	0	D	52.3	4.0	36.2	0.0	0.0	0.0	12.1
4831	642062.71	4749740.66	183.26	0	N	55.3	4.0	36.2	0.0	0.0	0.0	15.1
4831	642062.71	4749740.66	183.26	0	E	-81.0	4.0	36.2	0.0	0.0	0.0	-122.0
4837	640995.46	4749688.58	181.65	0	D	52.3	4.5	35.9	0.0	0.0	0.0	11.9
4837	640995.46	4749688.58	181.65	0	N	55.3	4.5	35.9	0.0	0.0	0.0	14.9
4837	640995.46	4749688.58	181.65	0	E	-81.0	4.5	35.9	0.0	0.0	0.0	-122.2
4847	641867.43	4749731.84	183.05	0	D	52.3	4.1	36.4	0.0	0.0	0.0	11.8
4847	641867.43	4749731.84	183.05	0	N	55.3	4.1	36.4	0.0	0.0	0.0	14.8
4847	641867.43	4749731.84	183.05	0	E	-81.0	4.1	36.4	0.0	0.0	0.0	-122.3
4854	641228.05	4749698.98	181.65	0	D	52.3	4.6	36.1	0.0	0.0	0.0	11.6
4854	641228.05	4749698.98	181.65	0	N	55.3	4.6	36.1	0.0	0.0	0.0	14.7
4854	641228.05	4749698.98	181.65	0	E	-81.0	4.6	36.1	0.0	0.0	0.0	-122.4
4862	641424.70	4749707.73	182.65	0	D	52.3	4.5	36.3	0.0	0.0	0.0	11.5
4862	641424.70	4749707.73	182.65	0	N	55.3	4.5	36.3	0.0	0.0	0.0	14.5
4862	641424.70	4749707.73	182.65	0	E	-81.0	4.5	36.3	0.0	0.0	0.0	-122.6
4867	640792.73	4749683.68	181.91	0	D	52.3	3.6	35.7	0.0	0.0	0.0	13.0

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4867	640792.73	4749683.68	181.91	0	N	55.3	3.6	35.7	0.0	0.0	0.0	16.0
4867	640792.73	4749683.68	181.91	0	E	-81.0	3.6	35.7	0.0	0.0	0.0	-121.1
4872	642088.76	4749741.83	182.65	0	D	52.3	4.0	36.8	0.0	0.0	0.0	11.5
4872	642088.76	4749741.83	182.65	0	N	55.3	4.0	36.8	0.0	0.0	0.0	14.5
4872	642088.76	4749741.83	182.65	0	E	-81.0	4.0	36.8	0.0	0.0	0.0	-122.6
4879	641460.81	4749709.36	182.65	0	D	52.3	4.4	36.5	0.0	0.0	0.0	11.4
4879	641460.81	4749709.36	182.65	0	N	55.3	4.4	36.5	0.0	0.0	0.0	14.4
4879	641460.81	4749709.36	182.65	0	E	-81.0	4.4	36.5	0.0	0.0	0.0	-122.7
4883	642073.77	4749741.15	183.04	0	D	52.3	4.0	36.9	0.0	0.0	0.0	11.4
4883	642073.77	4749741.15	183.04	0	N	55.3	4.0	36.9	0.0	0.0	0.0	14.4
4883	642073.77	4749741.15	183.04	0	E	-81.0	4.0	36.9	0.0	0.0	0.0	-122.7
4900	641441.12	4749708.44	182.65	0	D	52.3	4.5	36.6	0.0	0.0	0.0	11.2
4900	641441.12	4749708.44	182.65	0	N	55.3	4.5	36.6	0.0	0.0	0.0	14.3
4900	641441.12	4749708.44	182.65	0	E	-81.0	4.5	36.6	0.0	0.0	0.0	-122.8
4915	642059.28	4749740.50	183.27	0	D	52.3	4.0	37.1	0.0	0.0	0.0	11.2
4915	642059.28	4749740.50	183.27	0	N	55.3	4.0	37.1	0.0	0.0	0.0	14.2
4915	642059.28	4749740.50	183.27	0	E	-81.0	4.0	37.1	0.0	0.0	0.0	-122.9
4920	641159.88	4749695.90	182.39	0	D	52.3	4.4	36.8	0.0	0.0	0.0	11.2
4920	641159.88	4749695.90	182.39	0	N	55.3	4.4	36.8	0.0	0.0	0.0	14.2
4920	641159.88	4749695.90	182.39	0	E	-81.0	4.4	36.8	0.0	0.0	0.0	-122.9
4925	641196.85	4749697.51	181.65	0	D	52.3	4.7	36.5	0.0	0.0	0.0	11.2
4925	641196.85	4749697.51	181.65	0	N	55.3	4.7	36.5	0.0	0.0	0.0	14.2
4925	641196.85	4749697.51	181.65	0	E	-81.0	4.7	36.5	0.0	0.0	0.0	-122.9
4931	641936.44	4749735.07	182.93	0	D	52.3	4.1	37.2	0.0	0.0	0.0	11.1
4931	641936.44	4749735.07	182.93	0	N	55.3	4.1	37.2	0.0	0.0	0.0	14.1
4931	641936.44	4749735.07	182.93	0	E	-81.0	4.1	37.2	0.0	0.0	0.0	-123.0
4951	641330.49	4749703.47	182.29	0	D	52.3	4.5	36.8	0.0	0.0	0.0	11.0
4951	641330.49	4749703.47	182.29	0	N	55.3	4.5	36.8	0.0	0.0	0.0	14.0
4951	641330.49	4749703.47	182.29	0	E	-81.0	4.5	36.8	0.0	0.0	0.0	-123.1
4962	642027.90	4749739.09	183.29	0	D	52.3	4.0	37.4	0.0	0.0	0.0	10.9
4962	642027.90	4749739.09	183.29	0	N	55.3	4.0	37.4	0.0	0.0	0.0	13.9
4962	642027.90	4749739.09	183.29	0	E	-81.0	4.0	37.4	0.0	0.0	0.0	-123.2
4967	641176.37	4749696.68	182.42	0	D	52.3	4.4	37.0	0.0	0.0	0.0	10.9
4967	641176.37	4749696.68	182.42	0	N	55.3	4.4	37.0	0.0	0.0	0.0	13.9
4967	641176.37	4749696.68	182.42	0	E	-81.0	4.4	37.0	0.0	0.0	0.0	-123.2
4994	641199.61	4749697.62	181.65	0	D	52.3	4.7	36.8	0.0	0.0	0.0	10.8
4994	641199.61	4749697.62	181.65	0	N	55.3	4.7	36.8	0.0	0.0	0.0	13.8
4994	641199.61	4749697.62	181.65	0	E	-81.0	4.7	36.8	0.0	0.0	0.0	-123.2
5093	640815.02	4749684.50	181.65	0	D	52.3	5.6	36.0	0.0	0.0	0.0	10.7
5093	640815.02	4749684.50	181.65	0	N	55.3	5.6	36.0	0.0	0.0	0.0	13.7
5093	640815.02	4749684.50	181.65	0	E	-81.0	5.6	36.0	0.0	0.0	0.0	-123.4
5101	642307.95	4749751.66	181.65	0	D	52.3	4.0	37.6	0.0	0.0	0.0	10.7
5101	642307.95	4749751.66	181.65	0	N	55.3	4.0	37.6	0.0	0.0	0.0	13.7
5101	642307.95	4749751.66	181.65	0	E	-81.0	4.0	37.6	0.0	0.0	0.0	-123.4
5111	642301.41	4749751.37	181.65	0	D	52.3	4.0	37.7	0.0	0.0	0.0	10.5
5111	642301.41	4749751.37	181.65	0	N	55.3	4.0	37.7	0.0	0.0	0.0	13.6
5111	642301.41	4749751.37	181.65	0	E	-81.0	4.0	37.7	0.0	0.0	0.0	-123.5
5128	641219.66	4749698.56	181.65	0	D	52.3	4.2	37.5	0.0	0.0	0.0	10.6
5128	641219.66	4749698.56	181.65	0	N	55.3	4.2	37.5	0.0	0.0	0.0	13.6
5128	641219.66	4749698.56	181.65	0	E	-81.0	4.2	37.5	0.0	0.0	0.0	-123.5
5136	642033.68	4749739.35	183.29	0	D	52.3	4.0	37.7	0.0	0.0	0.0	10.5
5136	642033.68	4749739.35	183.29	0	N	55.3	4.0	37.7	0.0	0.0	0.0	13.6
5136	642033.68	4749739.35	183.29	0	E	-81.0	4.0	37.7	0.0	0.0	0.0	-123.5
5143	641441.63	4749708.47	182.65	0	D	52.3	4.5	37.3	0.0	0.0	0.0	10.5
5143	641441.63	4749708.47	182.65	0	N	55.3	4.5	37.3	0.0	0.0	0.0	13.5
5143	641441.63	4749708.47	182.65	0	E	-81.0	4.5	37.3	0.0	0.0	0.0	-123.6
5151	640930.83	4749685.60	181.65	0	D	52.3	4.3	37.5	0.0	0.0	0.0	10.5
5151	640930.83	4749685.60	181.65	0	N	55.3	4.3	37.5	0.0	0.0	0.0	13.5
5151	640930.83	4749685.60	181.65	0	E	-81.0	4.3	37.5	0.0	0.0	0.0	-123.6
5272	641431.87	4749708.03	182.65	0	D	52.3	4.5	37.5	0.0	0.0	0.0	10.3
5272	641431.87	4749708.03	182.65	0	N	55.3	4.5	37.5	0.0	0.0	0.0	13.3
5272	641431.87	4749708.03	182.65	0	E	-81.0	4.5	37.5	0.0	0.0	0.0	-123.8
5277	641429.11	4749707.91	182.65	0	D	52.3	4.5	37.5	0.0	0.0	0.0	10.3

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5277	641429.11	4749707.91	182.65	0	N	55.3	4.5	37.5	0.0	0.0	0.0	13.3
5277	641429.11	4749707.91	182.65	0	E	-81.0	4.5	37.5	0.0	0.0	0.0	-123.8
5283	641257.85	4749700.20	181.65	0	D	52.3	4.6	37.4	0.0	0.0	0.0	10.2
5283	641257.85	4749700.20	181.65	0	N	55.3	4.6	37.4	0.0	0.0	0.0	13.3
5283	641257.85	4749700.20	181.65	0	E	-81.0	4.6	37.4	0.0	0.0	0.0	-123.8
5289	641173.60	4749696.55	182.41	0	D	52.3	4.4	37.7	0.0	0.0	0.0	10.2
5289	641173.60	4749696.55	182.41	0	N	55.3	4.4	37.7	0.0	0.0	0.0	13.2
5289	641173.60	4749696.55	182.41	0	E	-81.0	4.4	37.7	0.0	0.0	0.0	-123.9
5299	641230.39	4749699.07	181.65	0	D	52.3	4.6	37.6	0.0	0.0	0.0	10.1
5299	641230.39	4749699.07	181.65	0	N	55.3	4.6	37.6	0.0	0.0	0.0	13.1
5299	641230.39	4749699.07	181.65	0	E	-81.0	4.6	37.6	0.0	0.0	0.0	-124.0
5304	641162.88	4749696.04	182.40	0	D	52.3	4.4	37.9	0.0	0.0	0.0	10.1
5304	641162.88	4749696.04	182.40	0	N	55.3	4.4	37.9	0.0	0.0	0.0	13.1
5304	641162.88	4749696.04	182.40	0	E	-81.0	4.4	37.9	0.0	0.0	0.0	-124.0
5311	640857.94	4749682.93	181.65	0	D	52.3	8.1	34.3	0.0	0.0	0.0	10.0
5311	640857.94	4749682.93	181.65	0	N	55.3	8.1	34.3	0.0	0.0	0.0	13.0
5311	640857.94	4749682.93	181.65	0	E	-81.0	8.1	34.3	0.0	0.0	0.0	-124.1
5315	641439.26	4749708.36	182.65	0	D	52.3	4.5	37.9	0.0	0.0	0.0	10.0
5315	641439.26	4749708.36	182.65	0	N	55.3	4.5	37.9	0.0	0.0	0.0	13.0
5315	641439.26	4749708.36	182.65	0	E	-81.0	4.5	37.9	0.0	0.0	0.0	-124.1
5333	642031.05	4749739.23	183.28	0	D	52.3	4.0	38.4	0.0	0.0	0.0	9.8
5333	642031.05	4749739.23	183.28	0	N	55.3	4.0	38.4	0.0	0.0	0.0	12.9
5333	642031.05	4749739.23	183.28	0	E	-81.0	4.0	38.4	0.0	0.0	0.0	-124.2
5345	642120.52	4749743.26	182.56	0	D	52.3	4.0	37.3	0.0	0.0	0.0	11.0
5345	642120.52	4749743.26	182.56	0	N	55.3	4.0	37.3	0.0	0.0	0.0	14.0
5345	642120.52	4749743.26	182.56	0	E	-81.0	4.0	37.3	0.0	0.0	0.0	-123.1
5353	642316.20	4749752.03	181.52	0	D	52.3	4.0	37.6	0.0	0.1	0.0	10.7
5353	642316.20	4749752.03	181.52	0	N	55.3	4.0	37.6	0.0	0.1	0.0	13.7
5353	642316.20	4749752.03	181.52	0	E	-81.0	4.0	37.6	0.0	0.1	0.0	-123.4
5367	642117.79	4749743.13	182.65	0	D	52.3	4.0	38.9	0.0	0.0	0.0	9.4
5367	642117.79	4749743.13	182.65	0	N	55.3	4.0	38.9	0.0	0.0	0.0	12.4
5367	642117.79	4749743.13	182.65	0	E	-81.0	4.0	38.9	0.0	0.0	0.0	-124.7
5371	640840.72	4749683.95	181.65	0	D	52.3	9.0	34.0	0.0	0.0	0.0	9.3
5371	640840.72	4749683.95	181.65	0	N	55.3	9.0	34.0	0.0	0.0	0.0	12.3
5371	640840.72	4749683.95	181.65	0	E	-81.0	9.0	34.0	0.0	0.0	0.0	-124.8
5375	640946.67	4749686.35	181.65	0	D	52.3	4.3	38.9	0.0	0.0	0.0	9.2
5375	640946.67	4749686.35	181.65	0	N	55.3	4.3	38.9	0.0	0.0	0.0	12.2
5375	640946.67	4749686.35	181.65	0	E	-81.0	4.3	38.9	0.0	0.0	0.0	-124.9
5378	642100.01	4749742.34	182.65	0	D	52.3	4.0	39.3	0.0	0.0	0.0	9.0
5378	642100.01	4749742.34	182.65	0	N	55.3	4.0	39.3	0.0	0.0	0.0	12.0
5378	642100.01	4749742.34	182.65	0	E	-81.0	4.0	39.3	0.0	0.0	0.0	-125.1
5383	640783.59	4749683.23	182.18	0	D	52.3	3.6	39.7	0.0	0.0	0.0	8.9
5383	640783.59	4749683.23	182.18	0	N	55.3	3.6	39.7	0.0	0.0	0.0	12.0
5383	640783.59	4749683.23	182.18	0	E	-81.0	3.6	39.7	0.0	0.0	0.0	-125.1
5412	640807.36	4749684.32	181.65	0	D	52.3	5.6	37.9	0.0	0.0	0.0	8.8
5412	640807.36	4749684.32	181.65	0	N	55.3	5.6	37.9	0.0	0.0	0.0	11.8
5412	640807.36	4749684.32	181.65	0	E	-81.0	5.6	37.9	0.0	0.0	0.0	-125.3
5418	640961.59	4749687.06	181.65	0	D	52.3	4.3	39.5	0.0	0.0	0.0	8.6
5418	640961.59	4749687.06	181.65	0	N	55.3	4.3	39.5	0.0	0.0	0.0	11.6
5418	640961.59	4749687.06	181.65	0	E	-81.0	4.3	39.5	0.0	0.0	0.0	-125.5
5451	642102.09	4749742.43	182.65	0	D	52.3	4.0	39.8	0.0	0.0	0.0	8.5
5451	642102.09	4749742.43	182.65	0	N	55.3	4.0	39.8	0.0	0.0	0.0	11.5
5451	642102.09	4749742.43	182.65	0	E	-81.0	4.0	39.8	0.0	0.0	0.0	-125.6
5464	641998.67	4749737.80	183.19	0	D	52.3	4.0	39.9	0.0	0.0	0.0	8.4
5464	641998.67	4749737.80	183.19	0	N	55.3	4.0	39.9	0.0	0.0	0.0	11.4
5464	641998.67	4749737.80	183.19	0	E	-81.0	4.0	39.9	0.0	0.0	0.0	-125.7
5469	642289.46	4749750.83	181.65	0	D	52.3	4.0	39.9	0.0	0.0	0.0	8.4
5469	642289.46	4749750.83	181.65	0	N	55.3	4.0	39.9	0.0	0.0	0.0	11.4
5469	642289.46	4749750.83	181.65	0	E	-81.0	4.0	39.9	0.0	0.0	0.0	-125.7
5500	640967.51	4749687.33	181.65	0	D	52.3	4.5	39.5	0.0	0.0	0.0	8.3
5500	640967.51	4749687.33	181.65	0	N	55.3	4.5	39.5	0.0	0.0	0.0	11.3
5500	640967.51	4749687.33	181.65	0	E	-81.0	4.5	39.5	0.0	0.0	0.0	-125.7
5511	642104.03	4749742.52	182.65	0	D	52.3	4.0	40.0	0.0	0.0	0.0	8.3

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5511	642104.03	4749742.52	182.65	0	N	55.3	4.0	40.0	0.0	0.0	0.0	11.3
5511	642104.03	4749742.52	182.65	0	E	-81.0	4.0	40.0	0.0	0.0	0.0	-125.8
5516	640885.25	4749683.57	181.65	0	D	52.3	4.5	39.6	0.0	0.0	0.0	8.2
5516	640885.25	4749683.57	181.65	0	N	55.3	4.5	39.6	0.0	0.0	0.0	11.2
5516	640885.25	4749683.57	181.65	0	E	-81.0	4.5	39.6	0.0	0.0	0.0	-125.8
5521	642097.42	4749742.22	182.65	0	D	52.3	4.0	40.1	0.0	0.0	0.0	8.2
5521	642097.42	4749742.22	182.65	0	N	55.3	4.0	40.1	0.0	0.0	0.0	11.2
5521	642097.42	4749742.22	182.65	0	E	-81.0	4.0	40.1	0.0	0.0	0.0	-125.8
5533	641409.22	4749707.07	182.65	0	D	52.3	4.5	39.6	0.0	0.0	0.0	8.2
5533	641409.22	4749707.07	182.65	0	N	55.3	4.5	39.6	0.0	0.0	0.0	11.2
5533	641409.22	4749707.07	182.65	0	E	-81.0	4.5	39.6	0.0	0.0	0.0	-125.9
5579	641408.85	4749707.05	182.64	0	D	52.3	4.5	39.7	0.0	0.0	0.0	8.1
5579	641408.85	4749707.05	182.64	0	N	55.3	4.5	39.7	0.0	0.0	0.0	11.1
5579	641408.85	4749707.05	182.64	0	E	-81.0	4.5	39.7	0.0	0.0	0.0	-126.0
5603	641221.38	4749698.65	181.65	0	D	52.3	4.2	40.3	0.0	0.0	0.0	7.8
5603	641221.38	4749698.65	181.65	0	N	55.3	4.2	40.3	0.0	0.0	0.0	10.8
5603	641221.38	4749698.65	181.65	0	E	-81.0	4.2	40.3	0.0	0.0	0.0	-126.3
5615	640821.97	4749684.59	181.65	0	D	52.3	7.5	37.1	0.0	0.0	0.0	7.7
5615	640821.97	4749684.59	181.65	0	N	55.3	7.5	37.1	0.0	0.0	0.0	10.8
5615	640821.97	4749684.59	181.65	0	E	-81.0	7.5	37.1	0.0	0.0	0.0	-126.3
5634	640800.92	4749684.08	181.65	0	D	52.3	3.6	41.0	0.0	0.0	0.0	7.7
5634	640800.92	4749684.08	181.65	0	N	55.3	3.6	41.0	0.0	0.0	0.0	10.7
5634	640800.92	4749684.08	181.65	0	E	-81.0	3.6	41.0	0.0	0.0	0.0	-126.4
5640	640894.96	4749684.00	181.65	0	D	52.3	4.7	40.1	0.0	0.0	0.0	7.6
5640	640894.96	4749684.00	181.65	0	N	55.3	4.7	40.1	0.0	0.0	0.0	10.6
5640	640894.96	4749684.00	181.65	0	E	-81.0	4.7	40.1	0.0	0.0	0.0	-126.5
5647	641438.68	4749708.34	182.65	0	D	52.3	4.5	40.2	0.0	0.0	0.0	7.6
5647	641438.68	4749708.34	182.65	0	N	55.3	4.5	40.2	0.0	0.0	0.0	10.6
5647	641438.68	4749708.34	182.65	0	E	-81.0	4.5	40.2	0.0	0.0	0.0	-126.5
5653	641438.93	4749708.35	182.65	0	D	52.3	4.5	40.2	0.0	0.0	0.0	7.6
5653	641438.93	4749708.35	182.65	0	N	55.3	4.5	40.2	0.0	0.0	0.0	10.6
5653	641438.93	4749708.35	182.65	0	E	-81.0	4.5	40.2	0.0	0.0	0.0	-126.5
5659	641178.54	4749696.78	182.42	0	D	52.3	4.4	40.4	0.0	0.0	0.0	7.5
5659	641178.54	4749696.78	182.42	0	N	55.3	4.4	40.4	0.0	0.0	0.0	10.6
5659	641178.54	4749696.78	182.42	0	E	-81.0	4.4	40.4	0.0	0.0	0.0	-126.5
5678	641171.63	4749696.45	182.41	0	D	52.3	4.4	40.5	0.0	0.0	0.0	7.5
5678	641171.63	4749696.45	182.41	0	N	55.3	4.4	40.5	0.0	0.0	0.0	10.5
5678	641171.63	4749696.45	182.41	0	E	-81.0	4.4	40.5	0.0	0.0	0.0	-126.6
5685	641201.99	4749697.71	181.65	0	D	52.3	4.7	40.2	0.0	0.0	0.0	7.4
5685	641201.99	4749697.71	181.65	0	N	55.3	4.7	40.2	0.0	0.0	0.0	10.4
5685	641201.99	4749697.71	181.65	0	E	-81.0	4.7	40.2	0.0	0.0	0.0	-126.6
5704	642026.14	4749739.01	183.29	0	D	52.3	4.0	41.0	0.0	0.0	0.0	7.2
5704	642026.14	4749739.01	183.29	0	N	55.3	4.0	41.0	0.0	0.0	0.0	10.2
5704	642026.14	4749739.01	183.29	0	E	-81.0	4.0	41.0	0.0	0.0	0.0	-126.8
5722	641438.45	4749708.32	182.65	0	D	52.3	4.5	40.7	0.0	0.0	0.0	7.1
5722	641438.45	4749708.32	182.65	0	N	55.3	4.5	40.7	0.0	0.0	0.0	10.1
5722	641438.45	4749708.32	182.65	0	E	-81.0	4.5	40.7	0.0	0.0	0.0	-126.9
5730	640845.72	4749683.64	181.65	0	D	52.3	9.3	36.0	0.0	0.0	0.0	7.1
5730	640845.72	4749683.64	181.65	0	N	55.3	9.3	36.0	0.0	0.0	0.0	10.1
5730	640845.72	4749683.64	181.65	0	E	-81.0	9.3	36.0	0.0	0.0	0.0	-127.0
5752	642115.79	4749743.04	182.65	0	D	52.3	4.0	41.5	0.0	0.0	0.0	6.8
5752	642115.79	4749743.04	182.65	0	N	55.3	4.0	41.5	0.0	0.0	0.0	9.8
5752	642115.79	4749743.04	182.65	0	E	-81.0	4.0	41.5	0.0	0.0	0.0	-127.3
5759	642320.20	4749752.21	181.39	0	D	52.3	4.0	41.5	0.0	0.2	0.0	6.6
5759	642320.20	4749752.21	181.39	0	N	55.3	4.0	41.5	0.0	0.2	0.0	9.6
5759	642320.20	4749752.21	181.39	0	E	-81.0	4.0	41.5	0.0	0.2	0.0	-127.4
5766	641434.73	4749708.16	182.65	0	D	52.3	4.5	41.2	0.0	0.0	0.0	6.7
5766	641434.73	4749708.16	182.65	0	N	55.3	4.5	41.2	0.0	0.0	0.0	9.7
5766	641434.73	4749708.16	182.65	0	E	-81.0	4.5	41.2	0.0	0.0	0.0	-127.4
5773	640872.77	4749683.01	181.65	0	D	52.3	4.5	41.3	0.0	0.0	0.0	6.6
5773	640872.77	4749683.01	181.65	0	N	55.3	4.5	41.3	0.0	0.0	0.0	9.6
5773	640872.77	4749683.01	181.65	0	E	-81.0	4.5	41.3	0.0	0.0	0.0	-127.5
5871	642029.60	4749739.17	183.29	0	D	52.3	4.0	41.7	0.0	0.0	0.0	6.6

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5871	642029.60	4749739.17	183.29	0	N	55.3	4.0	41.7	0.0	0.0	0.0	9.6
5871	642029.60	4749739.17	183.29	0	E	-81.0	4.0	41.7	0.0	0.0	0.0	-127.5
5877	640863.01	4749682.85	181.65	0	D	52.3	6.5	39.3	0.0	0.0	0.0	6.5
5877	640863.01	4749682.85	181.65	0	N	55.3	6.5	39.3	0.0	0.0	0.0	9.5
5877	640863.01	4749682.85	181.65	0	E	-81.0	6.5	39.3	0.0	0.0	0.0	-127.6
5884	642095.90	4749742.15	182.65	0	D	52.3	4.0	41.8	0.0	0.0	0.0	6.5
5884	642095.90	4749742.15	182.65	0	N	55.3	4.0	41.8	0.0	0.0	0.0	9.5
5884	642095.90	4749742.15	182.65	0	E	-81.0	4.0	41.8	0.0	0.0	0.0	-127.6
5897	641510.64	4749711.63	182.92	0	D	52.3	4.5	41.4	0.0	0.0	0.0	6.4
5897	641510.64	4749711.63	182.92	0	N	55.3	4.5	41.4	0.0	0.0	0.0	9.4
5897	641510.64	4749711.63	182.92	0	E	-81.0	4.5	41.4	0.0	0.0	0.0	-127.7
5909	640866.70	4749682.89	181.65	0	D	52.3	6.5	39.4	0.0	0.0	0.0	6.4
5909	640866.70	4749682.89	181.65	0	N	55.3	6.5	39.4	0.0	0.0	0.0	9.4
5909	640866.70	4749682.89	181.65	0	E	-81.0	6.5	39.4	0.0	0.0	0.0	-127.7
5916	642250.12	4749749.07	181.65	0	D	52.3	4.0	41.9	0.0	0.0	0.0	6.3
5916	642250.12	4749749.07	181.65	0	N	55.3	4.0	41.9	0.0	0.0	0.0	9.4
5916	642250.12	4749749.07	181.65	0	E	-81.0	4.0	41.9	0.0	0.0	0.0	-127.7
5923	640964.61	4749687.20	181.65	0	D	52.3	4.3	41.7	0.0	0.0	0.0	6.3
5923	640964.61	4749687.20	181.65	0	N	55.3	4.3	41.7	0.0	0.0	0.0	9.4
5923	640964.61	4749687.20	181.65	0	E	-81.0	4.3	41.7	0.0	0.0	0.0	-127.7
5958	640875.71	4749683.14	181.65	0	D	52.3	4.5	41.7	0.0	0.0	0.0	6.2
5958	640875.71	4749683.14	181.65	0	N	55.3	4.5	41.7	0.0	0.0	0.0	9.2
5958	640875.71	4749683.14	181.65	0	E	-81.0	4.5	41.7	0.0	0.0	0.0	-127.9
5989	640850.52	4749683.30	181.65	0	D	52.3	9.3	36.9	0.0	0.0	0.0	6.1
5989	640850.52	4749683.30	181.65	0	N	55.3	9.3	36.9	0.0	0.0	0.0	9.1
5989	640850.52	4749683.30	181.65	0	E	-81.0	9.3	36.9	0.0	0.0	0.0	-128.0
5996	640830.81	4749684.48	181.65	0	D	52.3	7.5	38.8	0.0	0.0	0.0	6.1
5996	640830.81	4749684.48	181.65	0	N	55.3	7.5	38.8	0.0	0.0	0.0	9.1
5996	640830.81	4749684.48	181.65	0	E	-81.0	7.5	38.8	0.0	0.0	0.0	-128.0
6008	640878.44	4749683.26	181.65	0	D	52.3	4.5	41.9	0.0	0.0	0.0	6.0
6008	640878.44	4749683.26	181.65	0	N	55.3	4.5	41.9	0.0	0.0	0.0	9.0
6008	640878.44	4749683.26	181.65	0	E	-81.0	4.5	41.9	0.0	0.0	0.0	-128.1
6018	642322.78	4749752.33	181.34	0	D	52.3	4.0	41.8	0.0	0.2	0.0	6.3
6018	642322.78	4749752.33	181.34	0	N	55.3	4.0	41.8	0.0	0.2	0.0	9.3
6018	642322.78	4749752.33	181.34	0	E	-81.0	4.0	41.8	0.0	0.2	0.0	-127.8
6024	640970.30	4749687.46	181.65	0	D	52.3	4.5	41.8	0.0	0.0	0.0	6.0
6024	640970.30	4749687.46	181.65	0	N	55.3	4.5	41.8	0.0	0.0	0.0	9.0
6024	640970.30	4749687.46	181.65	0	E	-81.0	4.5	41.8	0.0	0.0	0.0	-128.1
6051	641415.00	4749707.31	182.65	0	D	52.3	4.5	42.0	0.0	0.0	0.0	5.8
6051	641415.00	4749707.31	182.65	0	N	55.3	4.5	42.0	0.0	0.0	0.0	8.8
6051	641415.00	4749707.31	182.65	0	E	-81.0	4.5	42.0	0.0	0.0	0.0	-128.3
6087	641000.82	4749688.82	181.65	0	D	52.3	4.5	42.4	0.0	0.0	0.0	5.4
6087	641000.82	4749688.82	181.65	0	N	55.3	4.5	42.4	0.0	0.0	0.0	8.4
6087	641000.82	4749688.82	181.65	0	E	-81.0	4.5	42.4	0.0	0.0	0.0	-128.7
6101	640825.60	4749684.54	181.65	0	D	52.3	7.5	39.5	0.0	0.0	0.0	5.4
6101	640825.60	4749684.54	181.65	0	N	55.3	7.5	39.5	0.0	0.0	0.0	8.4
6101	640825.60	4749684.54	181.65	0	E	-81.0	7.5	39.5	0.0	0.0	0.0	-128.7
6108	641218.19	4749698.49	181.65	0	D	52.3	4.2	42.7	0.0	0.0	0.0	5.4
6108	641218.19	4749698.49	181.65	0	N	55.3	4.2	42.7	0.0	0.0	0.0	8.4
6108	641218.19	4749698.49	181.65	0	E	-81.0	4.2	42.7	0.0	0.0	0.0	-128.7
6115	642251.98	4749749.15	181.65	0	D	52.3	4.0	42.9	0.0	0.0	0.0	5.4
6115	642251.98	4749749.15	181.65	0	N	55.3	4.0	42.9	0.0	0.0	0.0	8.4
6115	642251.98	4749749.15	181.65	0	E	-81.0	4.0	42.9	0.0	0.0	0.0	-128.7
6121	640833.64	4749684.38	181.65	0	D	52.3	9.0	37.9	0.0	0.0	0.0	5.4
6121	640833.64	4749684.38	181.65	0	N	55.3	9.0	37.9	0.0	0.0	0.0	8.4
6121	640833.64	4749684.38	181.65	0	E	-81.0	9.0	37.9	0.0	0.0	0.0	-128.7
6128	640853.21	4749683.12	181.65	0	D	52.3	9.3	37.7	0.0	0.0	0.0	5.3
6128	640853.21	4749683.12	181.65	0	N	55.3	9.3	37.7	0.0	0.0	0.0	8.4
6128	640853.21	4749683.12	181.65	0	E	-81.0	9.3	37.7	0.0	0.0	0.0	-128.7
6135	642286.68	4749750.71	181.65	0	D	52.3	4.0	43.0	0.0	0.0	0.0	5.3
6135	642286.68	4749750.71	181.65	0	N	55.3	4.0	43.0	0.0	0.0	0.0	8.3
6135	642286.68	4749750.71	181.65	0	E	-81.0	4.0	43.0	0.0	0.0	0.0	-128.7
6154	640881.97	4749683.42	181.65	0	D	52.3	4.5	42.7	0.0	0.0	0.0	5.1

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6154	640881.97	4749683.42	181.65	0	N	55.3	4.5	42.7	0.0	0.0	0.0	8.1
6154	640881.97	4749683.42	181.65	0	E	-81.0	4.5	42.7	0.0	0.0	0.0	-128.9
6167	642284.03	4749750.59	181.65	0	D	52.3	4.0	43.2	0.0	0.0	0.0	5.1
6167	642284.03	4749750.59	181.65	0	N	55.3	4.0	43.2	0.0	0.0	0.0	8.1
6167	642284.03	4749750.59	181.65	0	E	-81.0	4.0	43.2	0.0	0.0	0.0	-129.0
6174	641170.55	4749696.40	182.41	0	D	52.3	4.4	42.9	0.0	0.0	0.0	5.0
6174	641170.55	4749696.40	182.41	0	N	55.3	4.4	42.9	0.0	0.0	0.0	8.1
6174	641170.55	4749696.40	182.41	0	E	-81.0	4.4	42.9	0.0	0.0	0.0	-129.0
6188	640991.01	4749688.38	181.65	0	D	52.3	4.5	42.9	0.0	0.0	0.0	4.9
6188	640991.01	4749688.38	181.65	0	N	55.3	4.5	42.9	0.0	0.0	0.0	7.9
6188	640991.01	4749688.38	181.65	0	E	-81.0	4.5	42.9	0.0	0.0	0.0	-129.2
6192	640888.44	4749683.72	181.65	0	D	52.3	4.5	43.0	0.0	0.0	0.0	4.9
6192	640888.44	4749683.72	181.65	0	N	55.3	4.5	43.0	0.0	0.0	0.0	7.9
6192	640888.44	4749683.72	181.65	0	E	-81.0	4.5	43.0	0.0	0.0	0.0	-129.2
6196	640892.12	4749683.88	181.65	0	D	52.3	4.7	42.7	0.0	0.0	0.0	4.9
6196	640892.12	4749683.88	181.65	0	N	55.3	4.7	42.7	0.0	0.0	0.0	7.9
6196	640892.12	4749683.88	181.65	0	E	-81.0	4.7	42.7	0.0	0.0	0.0	-129.2
6198	640828.10	4749684.51	181.65	0	D	52.3	7.5	40.0	0.0	0.0	0.0	4.9
6198	640828.10	4749684.51	181.65	0	N	55.3	7.5	40.0	0.0	0.0	0.0	7.9
6198	640828.10	4749684.51	181.65	0	E	-81.0	7.5	40.0	0.0	0.0	0.0	-129.2
6205	640773.22	4749682.72	182.27	0	D	52.3	3.6	43.8	0.0	0.0	0.0	4.9
6205	640773.22	4749682.72	182.27	0	N	55.3	3.6	43.8	0.0	0.0	0.0	7.9
6205	640773.22	4749682.72	182.27	0	E	-81.0	3.6	43.8	0.0	0.0	0.0	-129.2
6238	640869.20	4749682.91	181.65	0	D	52.3	6.5	41.2	0.0	0.0	0.0	4.6
6238	640869.20	4749682.91	181.65	0	N	55.3	6.5	41.2	0.0	0.0	0.0	7.7
6238	640869.20	4749682.91	181.65	0	E	-81.0	6.5	41.2	0.0	0.0	0.0	-129.4
6244	640778.13	4749682.96	182.26	0	D	52.3	3.6	44.1	0.0	0.0	0.0	4.6
6244	640778.13	4749682.96	182.26	0	N	55.3	3.6	44.1	0.0	0.0	0.0	7.6
6244	640778.13	4749682.96	182.26	0	E	-81.0	3.6	44.1	0.0	0.0	0.0	-129.5
6257	642312.13	4749751.85	181.65	0	D	52.3	4.0	43.7	0.0	0.0	0.0	4.6
6257	642312.13	4749751.85	181.65	0	N	55.3	4.0	43.7	0.0	0.0	0.0	7.6
6257	642312.13	4749751.85	181.65	0	E	-81.0	4.0	43.7	0.0	0.0	0.0	-129.5
6316	640775.72	4749682.84	182.26	0	D	52.3	3.6	44.3	0.0	0.0	0.0	4.3
6316	640775.72	4749682.84	182.26	0	N	55.3	3.6	44.3	0.0	0.0	0.0	7.4
6316	640775.72	4749682.84	182.26	0	E	-81.0	3.6	44.3	0.0	0.0	0.0	-129.7
6346	640890.29	4749683.80	181.65	0	D	52.3	4.5	43.8	0.0	0.0	0.0	4.1
6346	640890.29	4749683.80	181.65	0	N	55.3	4.5	43.8	0.0	0.0	0.0	7.1
6346	640890.29	4749683.80	181.65	0	E	-81.0	4.5	43.8	0.0	0.0	0.0	-130.0
6439	642296.59	4749751.15	181.65	0	D	52.3	4.0	44.3	0.0	0.0	0.0	4.0
6439	642296.59	4749751.15	181.65	0	N	55.3	4.0	44.3	0.0	0.0	0.0	7.0
6439	642296.59	4749751.15	181.65	0	E	-81.0	4.0	44.3	0.0	0.0	0.0	-130.1
6453	642292.21	4749750.96	181.65	0	D	52.3	4.0	44.4	0.0	0.0	0.0	3.9
6453	642292.21	4749750.96	181.65	0	N	55.3	4.0	44.4	0.0	0.0	0.0	6.9
6453	642292.21	4749750.96	181.65	0	E	-81.0	4.0	44.4	0.0	0.0	0.0	-130.2
6476	641429.42	4749707.93	182.65	0	D	52.3	4.5	44.0	0.0	0.0	0.0	3.8
6476	641429.42	4749707.93	182.65	0	N	55.3	4.5	44.0	0.0	0.0	0.0	6.8
6476	641429.42	4749707.93	182.65	0	E	-81.0	4.5	44.0	0.0	0.0	0.0	-130.3
6500	642032.27	4749739.29	183.28	0	D	52.3	4.0	44.6	0.0	0.0	0.0	3.7
6500	642032.27	4749739.29	183.28	0	N	55.3	4.0	44.6	0.0	0.0	0.0	6.7
6500	642032.27	4749739.29	183.28	0	E	-81.0	4.0	44.6	0.0	0.0	0.0	-130.4
6507	640770.87	4749682.61	182.27	0	D	52.3	3.6	45.0	0.0	0.0	0.0	3.7
6507	640770.87	4749682.61	182.27	0	N	55.3	3.6	45.0	0.0	0.0	0.0	6.7
6507	640770.87	4749682.61	182.27	0	E	-81.0	3.6	45.0	0.0	0.0	0.0	-130.4
6511	641999.47	4749737.84	183.20	0	D	52.3	4.0	44.7	0.0	0.0	0.0	3.6
6511	641999.47	4749737.84	183.20	0	N	55.3	4.0	44.7	0.0	0.0	0.0	6.7
6511	641999.47	4749737.84	183.20	0	E	-81.0	4.0	44.7	0.0	0.0	0.0	-130.4
6536	641201.16	4749697.68	181.65	0	D	52.3	4.7	44.3	0.0	0.0	0.0	3.3
6536	641201.16	4749697.68	181.65	0	N	55.3	4.7	44.3	0.0	0.0	0.0	6.4
6536	641201.16	4749697.68	181.65	0	E	-81.0	4.7	44.3	0.0	0.0	0.0	-130.7
6547	641434.88	4749708.16	182.65	0	D	52.3	4.5	44.6	0.0	0.0	0.0	3.2
6547	641434.88	4749708.16	182.65	0	N	55.3	4.5	44.6	0.0	0.0	0.0	6.2
6547	641434.88	4749708.16	182.65	0	E	-81.0	4.5	44.6	0.0	0.0	0.0	-130.8
6566	642098.62	4749742.27	182.65	0	D	52.3	4.0	45.1	0.0	0.0	0.0	3.2

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6566	642098.62	4749742.27	182.65	0	N	55.3	4.0	45.1	0.0	0.0	0.0	6.2
6566	642098.62	4749742.27	182.65	0	E	-81.0	4.0	45.1	0.0	0.0	0.0	-130.9
6577	641164.44	4749696.12	182.41	0	D	52.3	4.4	44.7	0.0	0.0	0.0	3.3
6577	641164.44	4749696.12	182.41	0	N	55.3	4.4	44.7	0.0	0.0	0.0	6.3
6577	641164.44	4749696.12	182.41	0	E	-81.0	4.4	44.7	0.0	0.0	0.0	-130.8
6583	642293.44	4749751.01	181.65	0	D	52.3	4.0	45.2	0.0	0.0	0.0	3.1
6583	642293.44	4749751.01	181.65	0	N	55.3	4.0	45.2	0.0	0.0	0.0	6.1
6583	642293.44	4749751.01	181.65	0	E	-81.0	4.0	45.2	0.0	0.0	0.0	-131.0
6618	642253.28	4749749.21	181.65	0	D	52.3	4.0	45.4	0.0	0.0	0.0	2.9
6618	642253.28	4749749.21	181.65	0	N	55.3	4.0	45.4	0.0	0.0	0.0	5.9
6618	642253.28	4749749.21	181.65	0	E	-81.0	4.0	45.4	0.0	0.0	0.0	-131.2
6648	640999.58	4749688.77	181.65	0	D	52.3	4.5	45.3	0.0	0.0	0.0	2.5
6648	640999.58	4749688.77	181.65	0	N	55.3	4.5	45.3	0.0	0.0	0.0	5.5
6648	640999.58	4749688.77	181.65	0	E	-81.0	4.5	45.3	0.0	0.0	0.0	-131.5
6758	642114.66	4749742.99	182.65	0	D	52.3	4.0	45.9	0.0	0.0	0.0	2.4
6758	642114.66	4749742.99	182.65	0	N	55.3	4.0	45.9	0.0	0.0	0.0	5.4
6758	642114.66	4749742.99	182.65	0	E	-81.0	4.0	45.9	0.0	0.0	0.0	-131.7
6769	642297.75	4749751.21	181.65	0	D	52.3	4.0	46.0	0.0	0.0	0.0	2.3
6769	642297.75	4749751.21	181.65	0	N	55.3	4.0	46.0	0.0	0.0	0.0	5.3
6769	642297.75	4749751.21	181.65	0	E	-81.0	4.0	46.0	0.0	0.0	0.0	-131.8
6775	640769.13	4749682.52	182.23	0	D	52.3	3.1	44.9	0.0	0.0	0.0	4.3
6775	640769.13	4749682.52	182.23	0	N	55.3	3.1	44.9	0.0	0.0	0.0	7.3
6775	640769.13	4749682.52	182.23	0	E	-81.0	3.1	44.9	0.0	0.0	0.0	-129.8
6780	640880.34	4749683.35	181.65	0	D	52.3	4.5	45.7	0.0	0.0	0.0	2.2
6780	640880.34	4749683.35	181.65	0	N	55.3	4.5	45.7	0.0	0.0	0.0	5.2
6780	640880.34	4749683.35	181.65	0	E	-81.0	4.5	45.7	0.0	0.0	0.0	-131.9
6792	642248.70	4749749.01	181.65	0	D	52.3	4.0	46.2	0.0	0.0	0.0	2.1
6792	642248.70	4749749.01	181.65	0	N	55.3	4.0	46.2	0.0	0.0	0.0	5.1
6792	642248.70	4749749.01	181.65	0	E	-81.0	4.0	46.2	0.0	0.0	0.0	-132.0
6809	642294.97	4749751.08	181.65	0	D	52.3	4.0	46.3	0.0	0.0	0.0	2.0
6809	642294.97	4749751.08	181.65	0	N	55.3	4.0	46.3	0.0	0.0	0.0	5.0
6809	642294.97	4749751.08	181.65	0	E	-81.0	4.0	46.3	0.0	0.0	0.0	-132.1
6852	640870.71	4749682.93	181.65	0	D	52.3	6.5	44.1	0.0	0.0	0.0	1.7
6852	640870.71	4749682.93	181.65	0	N	55.3	6.5	44.1	0.0	0.0	0.0	4.7
6852	640870.71	4749682.93	181.65	0	E	-81.0	6.5	44.1	0.0	0.0	0.0	-132.3
6877	640835.47	4749684.27	181.65	0	D	52.3	9.0	41.7	0.0	0.0	0.0	1.6
6877	640835.47	4749684.27	181.65	0	N	55.3	9.0	41.7	0.0	0.0	0.0	4.6
6877	640835.47	4749684.27	181.65	0	E	-81.0	9.0	41.7	0.0	0.0	0.0	-132.5
6998	642285.22	4749750.64	181.65	0	D	52.3	4.0	47.2	0.0	0.0	0.0	1.1
6998	642285.22	4749750.64	181.65	0	N	55.3	4.0	47.2	0.0	0.0	0.0	4.1
6998	642285.22	4749750.64	181.65	0	E	-81.0	4.0	47.2	0.0	0.0	0.0	-133.0
7003	640803.82	4749684.22	181.65	0	D	52.3	3.6	47.7	0.0	0.0	0.0	1.0
7003	640803.82	4749684.22	181.65	0	N	55.3	3.6	47.7	0.0	0.0	0.0	4.0
7003	640803.82	4749684.22	181.65	0	E	-81.0	3.6	47.7	0.0	0.0	0.0	-133.1
7009	640848.03	4749683.48	181.65	0	D	52.3	9.3	42.1	0.0	0.0	0.0	1.0
7009	640848.03	4749683.48	181.65	0	N	55.3	9.3	42.1	0.0	0.0	0.0	4.0
7009	640848.03	4749683.48	181.65	0	E	-81.0	9.3	42.1	0.0	0.0	0.0	-133.1
7100	640779.81	4749683.05	182.22	0	D	52.3	3.6	44.9	0.0	0.0	0.0	3.8
7100	640779.81	4749683.05	182.22	0	N	55.3	3.6	44.9	0.0	0.0	0.0	6.8
7100	640779.81	4749683.05	182.22	0	E	-81.0	3.6	44.9	0.0	0.0	0.0	-130.3
7143	642294.26	4749751.05	181.65	0	D	52.3	4.0	48.4	0.0	0.0	0.0	-0.1
7143	642294.26	4749751.05	181.65	0	N	55.3	4.0	48.4	0.0	0.0	0.0	2.9
7143	642294.26	4749751.05	181.65	0	E	-81.0	4.0	48.4	0.0	0.0	0.0	-134.2
7156	640949.21	4749686.47	181.65	0	D	52.3	4.3	48.2	0.0	0.0	0.0	-0.1
7156	640949.21	4749686.47	181.65	0	N	55.3	4.3	48.2	0.0	0.0	0.0	2.9
7156	640949.21	4749686.47	181.65	0	E	-81.0	4.3	48.2	0.0	0.0	0.0	-134.2
7164	642313.24	4749751.90	181.65	0	D	52.3	4.0	48.4	0.0	0.0	0.0	-0.2
7164	642313.24	4749751.90	181.65	0	N	55.3	4.0	48.4	0.0	0.0	0.0	2.8
7164	642313.24	4749751.90	181.65	0	E	-81.0	4.0	48.4	0.0	0.0	0.0	-134.2
7177	640836.36	4749684.22	181.65	0	D	52.3	9.0	43.5	0.0	0.0	0.0	-0.2
7177	640836.36	4749684.22	181.65	0	N	55.3	9.0	43.5	0.0	0.0	0.0	2.8
7177	640836.36	4749684.22	181.65	0	E	-81.0	9.0	43.5	0.0	0.0	0.0	-134.3
7204	640864.89	4749682.87	181.65	0	D	52.3	6.5	46.2	0.0	0.0	0.0	-0.4

Railway, FTA/FRA, Name: "Gio Rail - Locomotive", ID: "GIO_loco"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7204	640864.89	4749682.87	181.65	0	N	55.3	6.5	46.2	0.0	0.0	0.0	2.6
7204	640864.89	4749682.87	181.65	0	E	-81.0	6.5	46.2	0.0	0.0	0.0	-134.5
7229	642295.66	4749751.11	181.65	0	D	52.3	4.0	48.8	0.0	0.0	0.0	-0.5
7229	642295.66	4749751.11	181.65	0	N	55.3	4.0	48.8	0.0	0.0	0.0	2.5
7229	642295.66	4749751.11	181.65	0	E	-81.0	4.0	48.8	0.0	0.0	0.0	-134.6
7301	640848.77	4749683.42	181.65	0	D	52.3	9.3	44.1	0.0	0.0	0.0	-1.1
7301	640848.77	4749683.42	181.65	0	N	55.3	9.3	44.1	0.0	0.0	0.0	1.9
7301	640848.77	4749683.42	181.65	0	E	-81.0	9.3	44.1	0.0	0.0	0.0	-135.1
7347	640836.97	4749684.18	181.65	0	D	52.3	9.0	44.8	0.0	0.0	0.0	-1.5
7347	640836.97	4749684.18	181.65	0	N	55.3	9.0	44.8	0.0	0.0	0.0	1.5
7347	640836.97	4749684.18	181.65	0	E	-81.0	9.0	44.8	0.0	0.0	0.0	-135.6
7407	642115.00	4749743.01	182.65	0	D	52.3	4.0	50.8	0.0	0.0	0.0	-2.5
7407	642115.00	4749743.01	182.65	0	N	55.3	4.0	50.8	0.0	0.0	0.0	0.5
7407	642115.00	4749743.01	182.65	0	E	-81.0	4.0	50.8	0.0	0.0	0.0	-136.5
7423	642283.03	4749750.55	181.65	0	D	52.3	4.0	51.0	0.0	0.0	0.0	-2.7
7423	642283.03	4749750.55	181.65	0	N	55.3	4.0	51.0	0.0	0.0	0.0	0.3
7423	642283.03	4749750.55	181.65	0	E	-81.0	4.0	51.0	0.0	0.0	0.0	-136.8
7503	640837.40	4749684.15	181.65	0	D	52.3	9.0	46.7	0.0	0.0	0.0	-3.4
7503	640837.40	4749684.15	181.65	0	N	55.3	9.0	46.7	0.0	0.0	0.0	-0.4
7503	640837.40	4749684.15	181.65	0	E	-81.0	9.0	46.7	0.0	0.0	0.0	-137.5
7576	642291.43	4749750.92	181.65	0	D	52.3	4.0	52.4	0.0	0.0	0.0	-4.1
7576	642291.43	4749750.92	181.65	0	N	55.3	4.0	52.4	0.0	0.0	0.0	-1.1
7576	642291.43	4749750.92	181.65	0	E	-81.0	4.0	52.4	0.0	0.0	0.0	-138.2
7786	642285.70	4749750.66	181.65	0	D	52.3	4.0	54.3	0.0	0.0	0.0	-6.1
7786	642285.70	4749750.66	181.65	0	N	55.3	4.0	54.3	0.0	0.0	0.0	-3.1
7786	642285.70	4749750.66	181.65	0	E	-81.0	4.0	54.3	0.0	0.0	0.0	-140.1
7993	642285.60	4749750.66	181.65	0	D	52.3	4.0	57.2	0.0	0.0	0.0	-8.9
7993	642285.60	4749750.66	181.65	0	N	55.3	4.0	57.2	0.0	0.0	0.0	-5.9
7993	642285.60	4749750.66	181.65	0	E	-81.0	4.0	57.2	0.0	0.0	0.0	-143.0
8031	642313.56	4749751.91	181.65	0	D	52.3	4.0	57.6	0.0	0.0	0.0	-9.3
8031	642313.56	4749751.91	181.65	0	N	55.3	4.0	57.6	0.0	0.0	0.0	-6.3
8031	642313.56	4749751.91	181.65	0	E	-81.0	4.0	57.6	0.0	0.0	0.0	-143.4

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3102	641610.82	4749716.19	179.90	0	D	41.1	4.5	10.1	0.0	0.0	0.0	26.6
3102	641610.82	4749716.19	179.90	0	N	44.1	4.5	10.1	0.0	0.0	0.0	29.6
3102	641610.82	4749716.19	179.90	0	E	-81.0	4.5	10.1	0.0	0.0	0.0	-96.3
3165	641637.17	4749717.26	180.28	0	D	41.1	4.5	12.1	0.0	0.0	0.0	24.6
3165	641637.17	4749717.26	180.28	0	N	44.1	4.5	12.1	0.0	0.0	0.0	27.6
3165	641637.17	4749717.26	180.28	0	E	-81.0	4.5	12.1	0.0	0.0	0.0	-98.3
3172	641628.01	4749716.89	180.29	0	D	41.1	4.5	11.9	0.0	0.0	0.0	24.7
3172	641628.01	4749716.89	180.29	0	N	44.1	4.5	11.9	0.0	0.0	0.0	27.7
3172	641628.01	4749716.89	180.29	0	E	-81.0	4.5	11.9	0.0	0.0	0.0	-98.1
3229	641567.27	4749714.24	179.90	0	D	41.1	4.5	13.6	0.0	0.0	0.0	23.1
3229	641567.27	4749714.24	179.90	0	N	44.1	4.5	13.6	0.0	0.0	0.0	26.1
3229	641567.27	4749714.24	179.90	0	E	-81.0	4.5	13.6	0.0	0.0	0.0	-99.8
3239	641650.65	4749717.98	180.20	0	D	41.1	4.5	13.2	0.0	0.0	0.0	23.4
3239	641650.65	4749717.98	180.20	0	N	44.1	4.5	13.2	0.0	0.0	0.0	26.4
3239	641650.65	4749717.98	180.20	0	E	-81.0	4.5	13.2	0.0	0.0	0.0	-99.5
3264	641784.56	4749728.05	180.18	0	D	41.1	4.1	15.9	0.0	0.0	0.0	21.2
3264	641784.56	4749728.05	180.18	0	N	44.1	4.1	15.9	0.0	0.0	0.0	24.2
3264	641784.56	4749728.05	180.18	0	E	-81.0	4.1	15.9	0.0	0.0	0.0	-101.7
3379	641742.55	4749726.17	180.16	0	D	41.1	4.0	16.9	0.0	0.0	0.0	20.2
3379	641742.55	4749726.17	180.16	0	N	44.1	4.0	16.9	0.0	0.0	0.0	23.2
3379	641742.55	4749726.17	180.16	0	E	-81.0	4.0	16.9	0.0	0.0	0.0	-102.6
3399	641599.01	4749715.71	179.90	0	D	41.1	4.5	15.8	0.0	0.0	0.0	20.9
3399	641599.01	4749715.71	179.90	0	N	44.1	4.5	15.8	0.0	0.0	0.0	23.9
3399	641599.01	4749715.71	179.90	0	E	-81.0	4.5	15.8	0.0	0.0	0.0	-102.0
3402	641584.49	4749715.06	179.90	0	D	41.1	4.5	16.1	0.0	0.0	0.0	20.5
3402	641584.49	4749715.06	179.90	0	N	44.1	4.5	16.1	0.0	0.0	0.0	23.5
3402	641584.49	4749715.06	179.90	0	E	-81.0	4.5	16.1	0.0	0.0	0.0	-102.3

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3524	641657.74	4749718.54	180.19	0	D	41.1	4.7	16.3	0.0	0.0	0.0	20.1
3524	641657.74	4749718.54	180.19	0	N	44.1	4.7	16.3	0.0	0.0	0.0	23.1
3524	641657.74	4749718.54	180.19	0	E	-81.0	4.7	16.3	0.0	0.0	0.0	-102.7
3538	641677.51	4749721.43	180.19	0	D	41.1	4.9	16.6	0.0	0.0	0.0	19.6
3538	641677.51	4749721.43	180.19	0	N	44.1	4.9	16.6	0.0	0.0	0.0	22.6
3538	641677.51	4749721.43	180.19	0	E	-81.0	4.9	16.6	0.0	0.0	0.0	-103.2
3543	641643.62	4749717.55	180.21	0	D	41.1	4.5	16.9	0.0	0.0	0.0	19.7
3543	641643.62	4749717.55	180.21	0	N	44.1	4.5	16.9	0.0	0.0	0.0	22.7
3543	641643.62	4749717.55	180.21	0	E	-81.0	4.5	16.9	0.0	0.0	0.0	-103.2
3548	641538.84	4749712.88	180.24	0	D	41.1	4.5	17.4	0.0	0.0	0.0	19.3
3548	641538.84	4749712.88	180.24	0	N	44.1	4.5	17.4	0.0	0.0	0.0	22.3
3548	641538.84	4749712.88	180.24	0	E	-81.0	4.5	17.4	0.0	0.0	0.0	-103.6
3553	641525.62	4749712.28	180.19	0	D	41.1	4.5	17.4	0.0	0.0	0.0	19.2
3553	641525.62	4749712.28	180.19	0	N	44.1	4.5	17.4	0.0	0.0	0.0	22.2
3553	641525.62	4749712.28	180.19	0	E	-81.0	4.5	17.4	0.0	0.0	0.0	-103.7
3563	641670.54	4749720.27	180.14	0	D	41.1	4.9	16.9	0.0	0.0	0.0	19.4
3563	641670.54	4749720.27	180.14	0	N	44.1	4.9	16.9	0.0	0.0	0.0	22.4
3563	641670.54	4749720.27	180.14	0	E	-81.0	4.9	16.9	0.0	0.0	0.0	-103.5
3586	641589.29	4749715.28	179.90	0	D	41.1	4.5	17.5	0.0	0.0	0.0	19.2
3586	641589.29	4749715.28	179.90	0	N	44.1	4.5	17.5	0.0	0.0	0.0	22.2
3586	641589.29	4749715.28	179.90	0	E	-81.0	4.5	17.5	0.0	0.0	0.0	-103.7
3603	641662.42	4749719.09	180.19	0	D	41.1	4.7	17.4	0.0	0.0	0.0	19.0
3603	641662.42	4749719.09	180.19	0	N	44.1	4.7	17.4	0.0	0.0	0.0	22.0
3603	641662.42	4749719.09	180.19	0	E	-81.0	4.7	17.4	0.0	0.0	0.0	-103.8
3646	641618.96	4749716.52	179.90	0	D	41.1	4.5	18.1	0.0	0.0	0.0	18.6
3646	641618.96	4749716.52	179.90	0	N	44.1	4.5	18.1	0.0	0.0	0.0	21.6
3646	641618.96	4749716.52	179.90	0	E	-81.0	4.5	18.1	0.0	0.0	0.0	-104.3
3653	641602.51	4749715.85	179.90	0	D	41.1	4.5	18.2	0.0	0.0	0.0	18.4
3653	641602.51	4749715.85	179.90	0	N	44.1	4.5	18.2	0.0	0.0	0.0	21.4
3653	641602.51	4749715.85	179.90	0	E	-81.0	4.5	18.2	0.0	0.0	0.0	-104.4
3667	641556.35	4749713.72	180.13	0	D	41.1	4.5	18.5	0.0	0.0	0.0	18.2
3667	641556.35	4749713.72	180.13	0	N	44.1	4.5	18.5	0.0	0.0	0.0	21.2
3667	641556.35	4749713.72	180.13	0	E	-81.0	4.5	18.5	0.0	0.0	0.0	-104.7
3679	641595.37	4749715.56	179.90	0	D	41.1	4.5	18.3	0.0	0.0	0.0	18.3
3679	641595.37	4749715.56	179.90	0	N	44.1	4.5	18.3	0.0	0.0	0.0	21.3
3679	641595.37	4749715.56	179.90	0	E	-81.0	4.5	18.3	0.0	0.0	0.0	-104.5
3691	641683.70	4749722.38	180.21	0	D	41.1	4.7	18.3	0.0	0.0	0.0	18.1
3691	641683.70	4749722.38	180.21	0	N	44.1	4.7	18.3	0.0	0.0	0.0	21.1
3691	641683.70	4749722.38	180.21	0	E	-81.0	4.7	18.3	0.0	0.0	0.0	-104.8
3742	641592.59	4749715.44	179.90	0	D	41.1	4.5	18.5	0.0	0.0	0.0	18.2
3742	641592.59	4749715.44	179.90	0	N	44.1	4.5	18.5	0.0	0.0	0.0	21.2
3742	641592.59	4749715.44	179.90	0	E	-81.0	4.5	18.5	0.0	0.0	0.0	-104.7
3747	641622.63	4749716.67	180.07	0	D	41.1	4.4	18.4	0.0	0.0	0.0	18.3
3747	641622.63	4749716.67	180.07	0	N	44.1	4.4	18.4	0.0	0.0	0.0	21.3
3747	641622.63	4749716.67	180.07	0	E	-81.0	4.4	18.4	0.0	0.0	0.0	-104.6
3752	641576.92	4749714.70	179.90	0	D	41.1	4.5	18.7	0.0	0.0	0.0	18.0
3752	641576.92	4749714.70	179.90	0	N	44.1	4.5	18.7	0.0	0.0	0.0	21.0
3752	641576.92	4749714.70	179.90	0	E	-81.0	4.5	18.7	0.0	0.0	0.0	-104.9
3808	641724.29	4749725.36	180.15	0	D	41.1	4.1	20.0	0.0	0.0	0.0	17.1
3808	641724.29	4749725.36	180.15	0	N	44.1	4.1	20.0	0.0	0.0	0.0	20.1
3808	641724.29	4749725.36	180.15	0	E	-81.0	4.1	20.0	0.0	0.0	0.0	-105.8
3854	641693.58	4749723.53	180.21	0	D	41.1	4.4	19.8	0.0	0.0	0.0	16.9
3854	641693.58	4749723.53	180.21	0	N	44.1	4.4	19.8	0.0	0.0	0.0	19.9
3854	641693.58	4749723.53	180.21	0	E	-81.0	4.4	19.8	0.0	0.0	0.0	-106.0
3876	641688.73	4749723.03	180.22	0	D	41.1	4.6	19.7	0.0	0.0	0.0	16.8
3876	641688.73	4749723.03	180.22	0	N	44.1	4.6	19.7	0.0	0.0	0.0	19.8
3876	641688.73	4749723.03	180.22	0	E	-81.0	4.6	19.7	0.0	0.0	0.0	-106.1
3925	641550.93	4749713.46	180.32	0	D	41.1	4.5	20.5	0.0	0.0	0.0	16.1
3925	641550.93	4749713.46	180.32	0	N	44.1	4.5	20.5	0.0	0.0	0.0	19.1
3925	641550.93	4749713.46	180.32	0	E	-81.0	4.5	20.5	0.0	0.0	0.0	-106.8
4073	641698.73	4749724.00	180.17	0	D	41.1	4.4	21.0	0.0	0.0	0.0	15.7
4073	641698.73	4749724.00	180.17	0	N	44.1	4.4	21.0	0.0	0.0	0.0	18.7
4073	641698.73	4749724.00	180.17	0	E	-81.0	4.4	21.0	0.0	0.0	0.0	-107.1

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4126	641716.59	4749725.02	180.15	0	D	41.1	4.0	21.8	0.0	0.0	0.0	15.3
4126	641716.59	4749725.02	180.15	0	N	44.1	4.0	21.8	0.0	0.0	0.0	18.3
4126	641716.59	4749725.02	180.15	0	E	-81.0	4.0	21.8	0.0	0.0	0.0	-107.6
4163	641579.79	4749714.83	179.90	0	D	41.1	4.5	21.5	0.0	0.0	0.0	15.2
4163	641579.79	4749714.83	179.90	0	N	44.1	4.5	21.5	0.0	0.0	0.0	18.2
4163	641579.79	4749714.83	179.90	0	E	-81.0	4.5	21.5	0.0	0.0	0.0	-107.7
4235	641621.23	4749716.61	179.90	0	D	41.1	4.5	21.8	0.0	0.0	0.0	14.9
4235	641621.23	4749716.61	179.90	0	N	44.1	4.5	21.8	0.0	0.0	0.0	17.9
4235	641621.23	4749716.61	179.90	0	E	-81.0	4.5	21.8	0.0	0.0	0.0	-108.0
4259	641666.67	4749719.63	180.14	0	D	41.1	4.9	21.7	0.0	0.0	0.0	14.6
4259	641666.67	4749719.63	180.14	0	N	44.1	4.9	21.7	0.0	0.0	0.0	17.6
4259	641666.67	4749719.63	180.14	0	E	-81.0	4.9	21.7	0.0	0.0	0.0	-108.3
4279	641705.76	4749724.49	180.11	0	D	41.1	4.2	22.8	0.0	0.0	0.0	14.1
4279	641705.76	4749724.49	180.11	0	N	44.1	4.2	22.8	0.0	0.0	0.0	17.2
4279	641705.76	4749724.49	180.11	0	E	-81.0	4.2	22.8	0.0	0.0	0.0	-108.7
4295	641620.40	4749716.58	179.90	0	D	41.1	4.5	22.4	0.0	0.0	0.0	14.2
4295	641620.40	4749716.58	179.90	0	N	44.1	4.5	22.4	0.0	0.0	0.0	17.2
4295	641620.40	4749716.58	179.90	0	E	-81.0	4.5	22.4	0.0	0.0	0.0	-108.6
4361	641494.78	4749710.94	179.90	0	D	41.1	4.5	23.0	0.0	0.0	0.0	13.7
4361	641494.78	4749710.94	179.90	0	N	44.1	4.5	23.0	0.0	0.0	0.0	16.7
4361	641494.78	4749710.94	179.90	0	E	-81.0	4.5	23.0	0.0	0.0	0.0	-109.2
4413	641709.12	4749724.69	180.11	0	D	41.1	4.2	23.5	0.0	0.0	0.0	13.4
4413	641709.12	4749724.69	180.11	0	N	44.1	4.2	23.5	0.0	0.0	0.0	16.4
4413	641709.12	4749724.69	180.11	0	E	-81.0	4.2	23.5	0.0	0.0	0.0	-109.4
4420	641702.34	4749724.29	180.15	0	D	41.1	4.2	23.5	0.0	0.0	0.0	13.4
4420	641702.34	4749724.29	180.15	0	N	44.1	4.2	23.5	0.0	0.0	0.0	16.4
4420	641702.34	4749724.29	180.15	0	E	-81.0	4.2	23.5	0.0	0.0	0.0	-109.4
4435	641665.20	4749719.42	180.17	0	D	41.1	4.7	23.1	0.0	0.0	0.0	13.3
4435	641665.20	4749719.42	180.17	0	N	44.1	4.7	23.1	0.0	0.0	0.0	16.3
4435	641665.20	4749719.42	180.17	0	E	-81.0	4.7	23.1	0.0	0.0	0.0	-109.5
4471	641547.51	4749713.29	180.28	0	D	41.1	4.5	23.6	0.0	0.0	0.0	13.1
4471	641547.51	4749713.29	180.28	0	N	44.1	4.5	23.6	0.0	0.0	0.0	16.1
4471	641547.51	4749713.29	180.28	0	E	-81.0	4.5	23.6	0.0	0.0	0.0	-109.8
4486	641832.59	4749730.25	180.19	0	D	41.1	4.1	24.2	0.0	0.0	0.0	12.8
4486	641832.59	4749730.25	180.19	0	N	44.1	4.1	24.2	0.0	0.0	0.0	15.9
4486	641832.59	4749730.25	180.19	0	E	-81.0	4.1	24.2	0.0	0.0	0.0	-110.0
4500	641819.35	4749729.64	180.19	0	D	41.1	4.1	24.2	0.0	0.0	0.0	12.8
4500	641819.35	4749729.64	180.19	0	N	44.1	4.1	24.2	0.0	0.0	0.0	15.8
4500	641819.35	4749729.64	180.19	0	E	-81.0	4.1	24.2	0.0	0.0	0.0	-110.0
4518	641645.70	4749717.68	180.21	0	D	41.1	4.5	23.6	0.0	0.0	0.0	13.0
4518	641645.70	4749717.68	180.21	0	N	44.1	4.5	23.6	0.0	0.0	0.0	16.0
4518	641645.70	4749717.68	180.21	0	E	-81.0	4.5	23.6	0.0	0.0	0.0	-109.8
4680	641712.24	4749724.85	180.13	0	D	41.1	4.0	24.2	0.0	0.0	0.0	12.9
4680	641712.24	4749724.85	180.13	0	N	44.1	4.0	24.2	0.0	0.0	0.0	15.9
4680	641712.24	4749724.85	180.13	0	E	-81.0	4.0	24.2	0.0	0.0	0.0	-109.9
4704	641512.72	4749711.72	180.17	0	D	41.1	4.5	23.9	0.0	0.0	0.0	12.7
4704	641512.72	4749711.72	180.17	0	N	44.1	4.5	23.9	0.0	0.0	0.0	15.7
4704	641512.72	4749711.72	180.17	0	E	-81.0	4.5	23.9	0.0	0.0	0.0	-110.2
4765	641356.22	4749704.63	179.63	0	D	41.1	4.5	24.3	0.0	0.0	0.0	12.3
4765	641356.22	4749704.63	179.63	0	N	44.1	4.5	24.3	0.0	0.0	0.0	15.3
4765	641356.22	4749704.63	179.63	0	E	-81.0	4.5	24.3	0.0	0.0	0.0	-110.6
4772	641516.53	4749711.89	180.17	0	D	41.1	4.5	24.3	0.0	0.0	0.0	12.3
4772	641516.53	4749711.89	180.17	0	N	44.1	4.5	24.3	0.0	0.0	0.0	15.3
4772	641516.53	4749711.89	180.17	0	E	-81.0	4.5	24.3	0.0	0.0	0.0	-110.5
4792	641487.09	4749710.61	179.90	0	D	41.1	4.5	24.5	0.0	0.0	0.0	12.2
4792	641487.09	4749710.61	179.90	0	N	44.1	4.5	24.5	0.0	0.0	0.0	15.2
4792	641487.09	4749710.61	179.90	0	E	-81.0	4.5	24.5	0.0	0.0	0.0	-110.7
4805	641500.27	4749711.18	179.90	0	D	41.1	4.5	24.5	0.0	0.0	0.0	12.1
4805	641500.27	4749711.18	179.90	0	N	44.1	4.5	24.5	0.0	0.0	0.0	15.1
4805	641500.27	4749711.18	179.90	0	E	-81.0	4.5	24.5	0.0	0.0	0.0	-110.7
4843	641581.16	4749714.90	179.90	0	D	41.1	4.5	24.7	0.0	0.0	0.0	11.9
4843	641581.16	4749714.90	179.90	0	N	44.1	4.5	24.7	0.0	0.0	0.0	14.9
4843	641581.16	4749714.90	179.90	0	E	-81.0	4.5	24.7	0.0	0.0	0.0	-111.0

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4876	641388.41	4749706.12	179.78	0	D	41.1	4.4	25.5	0.0	0.0	0.0	11.2
4876	641388.41	4749706.12	179.78	0	N	44.1	4.4	25.5	0.0	0.0	0.0	14.2
4876	641388.41	4749706.12	179.78	0	E	-81.0	4.4	25.5	0.0	0.0	0.0	-111.7
4890	641504.07	4749711.35	180.04	0	D	41.1	4.5	25.4	0.0	0.0	0.0	11.3
4890	641504.07	4749711.35	180.04	0	N	44.1	4.5	25.4	0.0	0.0	0.0	14.3
4890	641504.07	4749711.35	180.04	0	E	-81.0	4.5	25.4	0.0	0.0	0.0	-111.6
4894	641844.87	4749730.81	180.20	0	D	41.1	4.1	26.0	0.0	0.0	0.0	11.1
4894	641844.87	4749730.81	180.20	0	N	44.1	4.1	26.0	0.0	0.0	0.0	14.1
4894	641844.87	4749730.81	180.20	0	E	-81.0	4.1	26.0	0.0	0.0	0.0	-111.8
4910	641545.53	4749713.20	180.27	0	D	41.1	4.5	25.5	0.0	0.0	0.0	11.2
4910	641545.53	4749713.20	180.27	0	N	44.1	4.5	25.5	0.0	0.0	0.0	14.2
4910	641545.53	4749713.20	180.27	0	E	-81.0	4.5	25.5	0.0	0.0	0.0	-111.7
4955	641917.72	4749734.20	180.23	0	D	41.1	4.1	26.3	0.0	1.5	0.0	9.3
4955	641917.72	4749734.20	180.23	0	N	44.1	4.1	26.3	0.0	1.5	0.0	12.3
4955	641917.72	4749734.20	180.23	0	E	-81.0	4.1	26.3	0.0	1.5	0.0	-113.5
4958	641475.08	4749710.04	179.90	0	D	41.1	4.4	25.9	0.0	0.0	0.0	10.8
4958	641475.08	4749710.04	179.90	0	N	44.1	4.4	25.9	0.0	0.0	0.0	13.8
4958	641475.08	4749710.04	179.90	0	E	-81.0	4.4	25.9	0.0	0.0	0.0	-112.0
4977	641321.26	4749703.06	179.54	0	D	41.1	4.5	26.0	0.0	0.0	0.0	10.7
4977	641321.26	4749703.06	179.54	0	N	44.1	4.5	26.0	0.0	0.0	0.0	13.7
4977	641321.26	4749703.06	179.54	0	E	-81.0	4.5	26.0	0.0	0.0	0.0	-112.2
5084	641507.12	4749711.48	180.17	0	D	41.1	4.5	25.9	0.0	0.0	0.0	10.7
5084	641507.12	4749711.48	180.17	0	N	44.1	4.5	25.9	0.0	0.0	0.0	13.7
5084	641507.12	4749711.48	180.17	0	E	-81.0	4.5	25.9	0.0	0.0	0.0	-112.1
5246	641873.55	4749732.13	180.31	0	D	41.1	4.1	26.7	0.0	0.0	0.0	10.3
5246	641873.55	4749732.13	180.31	0	N	44.1	4.1	26.7	0.0	0.0	0.0	13.3
5246	641873.55	4749732.13	180.31	0	E	-81.0	4.1	26.7	0.0	0.0	0.0	-112.6
5257	641673.70	4749720.80	180.17	0	D	41.1	4.9	25.8	0.0	0.0	0.0	10.5
5257	641673.70	4749720.80	180.17	0	N	44.1	4.9	25.8	0.0	0.0	0.0	13.5
5257	641673.70	4749720.80	180.17	0	E	-81.0	4.9	25.8	0.0	0.0	0.0	-112.4
5263	642174.05	4749745.66	178.90	0	D	41.1	4.0	27.0	0.0	7.8	0.0	2.3
5263	642174.05	4749745.66	178.90	0	N	44.1	4.0	27.0	0.0	7.8	0.0	5.3
5263	642174.05	4749745.66	178.90	0	E	-81.0	4.0	27.0	0.0	7.8	0.0	-118.9
5267	641976.68	4749736.84	180.26	0	D	41.1	4.0	27.0	0.0	2.3	0.0	7.9
5267	641976.68	4749736.84	180.26	0	N	44.1	4.0	27.0	0.0	2.3	0.0	10.9
5267	641976.68	4749736.84	180.26	0	E	-81.0	4.0	27.0	0.0	2.3	0.0	-114.7
5293	641480.82	4749710.32	179.90	0	D	41.1	4.4	26.6	0.0	0.0	0.0	10.0
5293	641480.82	4749710.32	179.90	0	N	44.1	4.4	26.6	0.0	0.0	0.0	13.1
5293	641480.82	4749710.32	179.90	0	E	-81.0	4.4	26.6	0.0	0.0	0.0	-112.8
5320	641097.30	4749693.07	179.30	0	D	41.1	4.3	27.2	0.0	0.0	0.0	9.6
5320	641097.30	4749693.07	179.30	0	N	44.1	4.3	27.2	0.0	0.0	0.0	12.6
5320	641097.30	4749693.07	179.30	0	E	-81.0	4.3	27.2	0.0	0.0	0.0	-113.3
5325	641377.89	4749705.62	179.75	0	D	41.1	4.4	26.9	0.0	0.0	0.0	9.8
5325	641377.89	4749705.62	179.75	0	N	44.1	4.4	26.9	0.0	0.0	0.0	12.8
5325	641377.89	4749705.62	179.75	0	E	-81.0	4.4	26.9	0.0	0.0	0.0	-113.1
5329	641903.33	4749733.52	180.24	0	D	41.1	4.1	27.4	0.0	0.8	0.0	8.9
5329	641903.33	4749733.52	180.24	0	N	44.1	4.1	27.4	0.0	0.8	0.0	11.9
5329	641903.33	4749733.52	180.24	0	E	-81.0	4.1	27.4	0.0	0.8	0.0	-113.9
5337	641300.63	4749702.10	179.52	0	D	41.1	4.4	27.1	0.0	0.0	0.0	9.6
5337	641300.63	4749702.10	179.52	0	N	44.1	4.4	27.1	0.0	0.0	0.0	12.7
5337	641300.63	4749702.10	179.52	0	E	-81.0	4.4	27.1	0.0	0.0	0.0	-113.2
5342	641398.16	4749706.58	179.82	0	D	41.1	4.4	27.0	0.0	0.0	0.0	9.7
5342	641398.16	4749706.58	179.82	0	N	44.1	4.4	27.0	0.0	0.0	0.0	12.7
5342	641398.16	4749706.58	179.82	0	E	-81.0	4.4	27.0	0.0	0.0	0.0	-113.2
5347	641509.57	4749711.59	180.17	0	D	41.1	4.5	27.1	0.0	0.0	0.0	9.5
5347	641509.57	4749711.59	180.17	0	N	44.1	4.5	27.1	0.0	0.0	0.0	12.5
5347	641509.57	4749711.59	180.17	0	E	-81.0	4.5	27.1	0.0	0.0	0.0	-113.4
5358	641340.97	4749703.94	179.55	0	D	41.1	4.5	27.3	0.0	0.0	0.0	9.3
5358	641340.97	4749703.94	179.55	0	N	44.1	4.5	27.3	0.0	0.0	0.0	12.3
5358	641340.97	4749703.94	179.55	0	E	-81.0	4.5	27.3	0.0	0.0	0.0	-113.6
5363	641405.34	4749706.90	179.87	0	D	41.1	4.5	27.3	0.0	0.0	0.0	9.3
5363	641405.34	4749706.90	179.87	0	N	44.1	4.5	27.3	0.0	0.0	0.0	12.3
5363	641405.34	4749706.90	179.87	0	E	-81.0	4.5	27.3	0.0	0.0	0.0	-113.5

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5388	641467.55	4749709.68	179.90	0	D	41.1	4.4	27.8	0.0	0.0	0.0	8.9
5388	641467.55	4749709.68	179.90	0	N	44.1	4.4	27.8	0.0	0.0	0.0	11.9
5388	641467.55	4749709.68	179.90	0	E	-81.0	4.4	27.8	0.0	0.0	0.0	-114.0
5408	641863.33	4749731.65	180.26	0	D	41.1	4.1	28.3	0.0	0.0	0.0	8.7
5408	641863.33	4749731.65	180.26	0	N	44.1	4.1	28.3	0.0	0.0	0.0	11.7
5408	641863.33	4749731.65	180.26	0	E	-81.0	4.1	28.3	0.0	0.0	0.0	-114.2
5457	641244.21	4749699.64	178.90	0	D	41.1	4.6	28.2	0.0	0.7	0.0	7.5
5457	641244.21	4749699.64	178.90	0	N	44.1	4.6	28.2	0.0	0.7	0.0	10.5
5457	641244.21	4749699.64	178.90	0	E	-81.0	4.6	28.2	0.0	0.7	0.0	-115.3
5473	641283.29	4749701.28	179.52	0	D	41.1	4.4	28.5	0.0	0.0	0.0	8.2
5473	641283.29	4749701.28	179.52	0	N	44.1	4.4	28.5	0.0	0.0	0.0	11.2
5473	641283.29	4749701.28	179.52	0	E	-81.0	4.4	28.5	0.0	0.0	0.0	-114.6
5505	641471.52	4749709.87	179.90	0	D	41.1	4.4	28.4	0.0	0.0	0.0	8.3
5505	641471.52	4749709.87	179.90	0	N	44.1	4.4	28.4	0.0	0.0	0.0	11.3
5505	641471.52	4749709.87	179.90	0	E	-81.0	4.4	28.4	0.0	0.0	0.0	-114.6
5527	641457.91	4749709.22	179.90	0	D	41.1	4.4	28.5	0.0	0.0	0.0	8.2
5527	641457.91	4749709.22	179.90	0	N	44.1	4.4	28.5	0.0	0.0	0.0	11.2
5527	641457.91	4749709.22	179.90	0	E	-81.0	4.4	28.5	0.0	0.0	0.0	-114.7
5586	641454.92	4749709.07	179.90	0	D	41.1	4.4	28.7	0.0	0.0	0.0	8.0
5586	641454.92	4749709.07	179.90	0	N	44.1	4.4	28.7	0.0	0.0	0.0	11.0
5586	641454.92	4749709.07	179.90	0	E	-81.0	4.4	28.7	0.0	0.0	0.0	-114.8
5592	642013.56	4749738.45	180.54	0	D	41.1	4.0	29.2	0.0	1.0	0.0	6.9
5592	642013.56	4749738.45	180.54	0	N	44.1	4.0	29.2	0.0	1.0	0.0	9.9
5592	642013.56	4749738.45	180.54	0	E	-81.0	4.0	29.2	0.0	1.0	0.0	-115.9
5598	641852.80	4749731.17	180.20	0	D	41.1	4.1	29.1	0.0	0.0	0.0	7.9
5598	641852.80	4749731.17	180.20	0	N	44.1	4.1	29.1	0.0	0.0	0.0	10.9
5598	641852.80	4749731.17	180.20	0	E	-81.0	4.1	29.1	0.0	0.0	0.0	-115.0
5610	641436.63	4749708.24	179.90	0	D	41.1	4.5	28.9	0.0	0.0	0.0	7.7
5610	641436.63	4749708.24	179.90	0	N	44.1	4.5	28.9	0.0	0.0	0.0	10.7
5610	641436.63	4749708.24	179.90	0	E	-81.0	4.5	28.9	0.0	0.0	0.0	-115.2
5622	641128.62	4749694.50	179.48	0	D	41.1	4.7	28.8	0.0	0.0	0.0	7.6
5622	641128.62	4749694.50	179.48	0	N	44.1	4.7	28.8	0.0	0.0	0.0	10.6
5622	641128.62	4749694.50	179.48	0	E	-81.0	4.7	28.8	0.0	0.0	0.0	-115.3
5628	641043.94	4749690.72	178.99	0	D	41.1	4.5	29.1	0.0	0.0	0.0	7.5
5628	641043.94	4749690.72	178.99	0	N	44.1	4.5	29.1	0.0	0.0	0.0	10.5
5628	641043.94	4749690.72	178.99	0	E	-81.0	4.5	29.1	0.0	0.0	0.0	-115.4
5665	641411.46	4749707.16	179.90	0	D	41.1	4.5	29.1	0.0	0.0	0.0	7.5
5665	641411.46	4749707.16	179.90	0	N	44.1	4.5	29.1	0.0	0.0	0.0	10.5
5665	641411.46	4749707.16	179.90	0	E	-81.0	4.5	29.1	0.0	0.0	0.0	-115.4
5672	641961.07	4749736.16	180.27	0	D	41.1	4.0	29.8	0.0	2.9	0.0	4.4
5672	641961.07	4749736.16	180.27	0	N	44.1	4.0	29.8	0.0	2.9	0.0	7.4
5672	641961.07	4749736.16	180.27	0	E	-81.0	4.0	29.8	0.0	2.9	0.0	-118.0
5693	641271.95	4749700.78	179.52	0	D	41.1	4.6	29.3	0.0	0.0	0.0	7.1
5693	641271.95	4749700.78	179.52	0	N	44.1	4.6	29.3	0.0	0.0	0.0	10.1
5693	641271.95	4749700.78	179.52	0	E	-81.0	4.6	29.3	0.0	0.0	0.0	-115.7
5699	641148.98	4749695.39	179.59	0	D	41.1	4.4	29.6	0.0	0.0	0.0	7.1
5699	641148.98	4749695.39	179.59	0	N	44.1	4.4	29.6	0.0	0.0	0.0	10.1
5699	641148.98	4749695.39	179.59	0	E	-81.0	4.4	29.6	0.0	0.0	0.0	-115.8
5714	642233.27	4749748.31	178.90	0	D	41.1	4.0	30.1	0.0	7.6	0.0	-0.6
5714	642233.27	4749748.31	178.90	0	N	44.1	4.0	30.1	0.0	7.6	0.0	2.4
5714	642233.27	4749748.31	178.90	0	E	-81.0	4.0	30.1	0.0	7.6	0.0	-121.9
5737	641478.20	4749710.19	179.90	0	D	41.1	4.4	29.8	0.0	0.0	0.0	6.9
5737	641478.20	4749710.19	179.90	0	N	44.1	4.4	29.8	0.0	0.0	0.0	9.9
5737	641478.20	4749710.19	179.90	0	E	-81.0	4.4	29.8	0.0	0.0	0.0	-116.0
5744	641857.65	4749731.39	180.20	0	D	41.1	4.1	30.3	0.0	0.0	0.0	6.7
5744	641857.65	4749731.39	180.20	0	N	44.1	4.1	30.3	0.0	0.0	0.0	9.7
5744	641857.65	4749731.39	180.20	0	E	-81.0	4.1	30.3	0.0	0.0	0.0	-116.1
5864	641446.89	4749708.70	179.90	0	D	41.1	4.5	30.1	0.0	0.0	0.0	6.5
5864	641446.89	4749708.70	179.90	0	N	44.1	4.5	30.1	0.0	0.0	0.0	9.5
5864	641446.89	4749708.70	179.90	0	E	-81.0	4.5	30.1	0.0	0.0	0.0	-116.3
5890	641421.84	4749707.61	179.90	0	D	41.1	4.5	30.2	0.0	0.0	0.0	6.4
5890	641421.84	4749707.61	179.90	0	N	44.1	4.5	30.2	0.0	0.0	0.0	9.4
5890	641421.84	4749707.61	179.90	0	E	-81.0	4.5	30.2	0.0	0.0	0.0	-116.5

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5902	641416.61	4749707.38	179.90	0	D	41.1	4.5	30.2	0.0	0.0	0.0	6.3
5902	641416.61	4749707.38	179.90	0	N	44.1	4.5	30.2	0.0	0.0	0.0	9.4
5902	641416.61	4749707.38	179.90	0	E	-81.0	4.5	30.2	0.0	0.0	0.0	-116.5
5931	641426.40	4749707.80	179.90	0	D	41.1	4.5	30.3	0.0	0.0	0.0	6.3
5931	641426.40	4749707.80	179.90	0	N	44.1	4.5	30.3	0.0	0.0	0.0	9.3
5931	641426.40	4749707.80	179.90	0	E	-81.0	4.5	30.3	0.0	0.0	0.0	-116.6
5937	642040.60	4749739.66	180.54	0	D	41.1	4.0	31.0	0.0	1.9	0.0	4.2
5937	642040.60	4749739.66	180.54	0	N	44.1	4.0	31.0	0.0	1.9	0.0	7.2
5937	642040.60	4749739.66	180.54	0	E	-81.0	4.0	31.0	0.0	1.9	0.0	-118.5
5944	641189.30	4749697.21	179.28	0	D	41.1	4.7	29.6	0.0	0.0	0.0	6.8
5944	641189.30	4749697.21	179.28	0	N	44.1	4.7	29.6	0.0	0.0	0.0	9.8
5944	641189.30	4749697.21	179.28	0	E	-81.0	4.7	29.6	0.0	0.0	0.0	-116.1
5951	641212.35	4749698.19	178.90	0	D	41.1	4.2	30.8	0.0	0.0	0.0	6.1
5951	641212.35	4749698.19	178.90	0	N	44.1	4.2	30.8	0.0	0.0	0.0	9.1
5951	641212.35	4749698.19	178.90	0	E	-81.0	4.2	30.8	0.0	0.0	0.0	-116.8
5966	641465.11	4749709.56	179.90	0	D	41.1	4.4	30.6	0.0	0.0	0.0	6.1
5966	641465.11	4749709.56	179.90	0	N	44.1	4.4	30.6	0.0	0.0	0.0	9.1
5966	641465.11	4749709.56	179.90	0	E	-81.0	4.4	30.6	0.0	0.0	0.0	-116.8
5974	641881.32	4749732.49	180.34	0	D	41.1	4.1	31.0	0.0	0.0	0.0	6.0
5974	641881.32	4749732.49	180.34	0	N	44.1	4.1	31.0	0.0	0.0	0.0	9.1
5974	641881.32	4749732.49	180.34	0	E	-81.0	4.1	31.0	0.0	0.0	0.0	-116.8
5982	641369.66	4749705.23	179.72	0	D	41.1	4.5	30.6	0.0	0.0	0.0	6.1
5982	641369.66	4749705.23	179.72	0	N	44.1	4.5	30.6	0.0	0.0	0.0	9.1
5982	641369.66	4749705.23	179.72	0	E	-81.0	4.5	30.6	0.0	0.0	0.0	-116.8
6001	641463.39	4749709.48	179.90	0	D	41.1	4.4	30.7	0.0	0.0	0.0	6.0
6001	641463.39	4749709.48	179.90	0	N	44.1	4.4	30.7	0.0	0.0	0.0	9.0
6001	641463.39	4749709.48	179.90	0	E	-81.0	4.4	30.7	0.0	0.0	0.0	-116.8
6030	641894.98	4749733.13	180.25	0	D	41.1	4.1	31.1	0.0	0.5	0.0	5.5
6030	641894.98	4749733.13	180.25	0	N	44.1	4.1	31.1	0.0	0.5	0.0	8.5
6030	641894.98	4749733.13	180.25	0	E	-81.0	4.1	31.1	0.0	0.5	0.0	-117.4
6036	641940.38	4749735.25	180.20	0	D	41.1	4.0	31.3	0.0	2.8	0.0	3.1
6036	641940.38	4749735.25	180.20	0	N	44.1	4.0	31.3	0.0	2.8	0.0	6.1
6036	641940.38	4749735.25	180.20	0	E	-81.0	4.0	31.3	0.0	2.8	0.0	-119.4
6043	641667.64	4749719.79	180.12	0	D	41.1	4.9	30.4	0.0	0.0	0.0	5.9
6043	641667.64	4749719.79	180.12	0	N	44.1	4.9	30.4	0.0	0.0	0.0	8.9
6043	641667.64	4749719.79	180.12	0	E	-81.0	4.9	30.4	0.0	0.0	0.0	-117.0
6048	641068.08	4749691.74	179.13	0	D	41.1	4.9	30.6	0.0	0.0	0.0	5.7
6048	641068.08	4749691.74	179.13	0	N	44.1	4.9	30.6	0.0	0.0	0.0	8.7
6048	641068.08	4749691.74	179.13	0	E	-81.0	4.9	30.6	0.0	0.0	0.0	-117.2
6057	642129.55	4749743.66	179.31	0	D	41.1	4.0	30.6	0.0	6.8	0.0	-0.3
6057	642129.55	4749743.66	179.31	0	N	44.1	4.0	30.6	0.0	6.8	0.0	2.7
6057	642129.55	4749743.66	179.31	0	E	-81.0	4.0	30.6	0.0	6.8	0.0	-121.8
6069	641928.87	4749734.72	180.19	0	D	41.1	4.1	31.5	0.0	2.1	0.0	3.4
6069	641928.87	4749734.72	180.19	0	N	44.1	4.1	31.5	0.0	2.1	0.0	6.4
6069	641928.87	4749734.72	180.19	0	E	-81.0	4.1	31.5	0.0	2.1	0.0	-119.2
6076	642208.60	4749747.21	178.90	0	D	41.1	4.0	31.7	0.0	7.4	0.0	-2.0
6076	642208.60	4749747.21	178.90	0	N	44.1	4.0	31.7	0.0	7.4	0.0	1.0
6076	642208.60	4749747.21	178.90	0	E	-81.0	4.0	31.7	0.0	7.4	0.0	-123.3
6081	641442.83	4749708.52	179.90	0	D	41.1	4.5	31.1	0.0	0.0	0.0	5.5
6081	641442.83	4749708.52	179.90	0	N	44.1	4.5	31.1	0.0	0.0	0.0	8.5
6081	641442.83	4749708.52	179.90	0	E	-81.0	4.5	31.1	0.0	0.0	0.0	-117.3
6094	642081.18	4749741.49	180.10	0	D	41.1	4.0	31.5	0.0	3.9	0.0	1.7
6094	642081.18	4749741.49	180.10	0	N	44.1	4.0	31.5	0.0	3.9	0.0	4.7
6094	642081.18	4749741.49	180.10	0	E	-81.0	4.0	31.5	0.0	3.9	0.0	-120.5
6141	641889.00	4749732.85	180.30	0	D	41.1	4.1	31.7	0.0	0.2	0.0	5.1
6141	641889.00	4749732.85	180.30	0	N	44.1	4.1	31.7	0.0	0.2	0.0	8.1
6141	641889.00	4749732.85	180.30	0	E	-81.0	4.1	31.7	0.0	0.2	0.0	-117.8
6147	641011.34	4749689.28	178.90	0	D	41.1	4.6	31.4	0.0	0.0	0.0	5.1
6147	641011.34	4749689.28	178.90	0	N	44.1	4.6	31.4	0.0	0.0	0.0	8.1
6147	641011.34	4749689.28	178.90	0	E	-81.0	4.6	31.4	0.0	0.0	0.0	-117.7
6160	641696.34	4749723.79	180.19	0	D	41.1	4.4	31.5	0.0	0.0	0.0	5.2
6160	641696.34	4749723.79	180.19	0	N	44.1	4.4	31.5	0.0	0.0	0.0	8.2
6160	641696.34	4749723.79	180.19	0	E	-81.0	4.4	31.5	0.0	0.0	0.0	-117.7

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6179	641483.94	4749710.47	179.90	0	D	41.1	4.4	31.7	0.0	0.0	0.0	5.0
6179	641483.94	4749710.47	179.90	0	N	44.1	4.4	31.7	0.0	0.0	0.0	8.0
6179	641483.94	4749710.47	179.90	0	E	-81.0	4.4	31.7	0.0	0.0	0.0	-117.9
6183	641885.28	4749732.68	180.34	0	D	41.1	4.1	32.1	0.0	0.1	0.0	4.8
6183	641885.28	4749732.68	180.34	0	N	44.1	4.1	32.1	0.0	0.1	0.0	7.8
6183	641885.28	4749732.68	180.34	0	E	-81.0	4.1	32.1	0.0	0.1	0.0	-118.0
6213	642263.53	4749749.67	178.90	0	D	41.1	4.0	32.4	0.0	8.1	0.0	-3.4
6213	642263.53	4749749.67	178.90	0	N	44.1	4.0	32.4	0.0	8.1	0.0	-0.3
6213	642263.53	4749749.67	178.90	0	E	-81.0	4.0	32.4	0.0	8.1	0.0	-124.5
6220	641451.32	4749708.90	179.90	0	D	41.1	4.5	31.8	0.0	0.0	0.0	4.8
6220	641451.32	4749708.90	179.90	0	N	44.1	4.5	31.8	0.0	0.0	0.0	7.8
6220	641451.32	4749708.90	179.90	0	E	-81.0	4.5	31.8	0.0	0.0	0.0	-118.1
6225	641449.84	4749708.84	179.90	0	D	41.1	4.5	31.9	0.0	0.0	0.0	4.7
6225	641449.84	4749708.84	179.90	0	N	44.1	4.5	31.9	0.0	0.0	0.0	7.7
6225	641449.84	4749708.84	179.90	0	E	-81.0	4.5	31.9	0.0	0.0	0.0	-118.2
6232	640980.79	4749687.93	178.90	0	D	41.1	4.5	32.0	0.0	0.0	0.0	4.6
6232	640980.79	4749687.93	178.90	0	N	44.1	4.5	32.0	0.0	0.0	0.0	7.6
6232	640980.79	4749687.93	178.90	0	E	-81.0	4.5	32.0	0.0	0.0	0.0	-118.3
6250	641490.15	4749710.74	179.90	0	D	41.1	4.5	32.0	0.0	0.0	0.0	4.6
6250	641490.15	4749710.74	179.90	0	N	44.1	4.5	32.0	0.0	0.0	0.0	7.6
6250	641490.15	4749710.74	179.90	0	E	-81.0	4.5	32.0	0.0	0.0	0.0	-118.3
6265	641491.02	4749710.78	179.90	0	D	41.1	4.5	32.1	0.0	0.0	0.0	4.6
6265	641491.02	4749710.78	179.90	0	N	44.1	4.5	32.1	0.0	0.0	0.0	7.6
6265	641491.02	4749710.78	179.90	0	E	-81.0	4.5	32.1	0.0	0.0	0.0	-118.3
6274	642143.14	4749744.27	178.90	0	D	41.1	4.0	32.7	0.0	8.2	0.0	-3.8
6274	642143.14	4749744.27	178.90	0	N	44.1	4.0	32.7	0.0	8.2	0.0	-0.8
6274	642143.14	4749744.27	178.90	0	E	-81.0	4.0	32.7	0.0	8.2	0.0	-125.0
6282	641452.74	4749708.97	179.90	0	D	41.1	4.4	32.3	0.0	0.0	0.0	4.4
6282	641452.74	4749708.97	179.90	0	N	44.1	4.4	32.3	0.0	0.0	0.0	7.4
6282	641452.74	4749708.97	179.90	0	E	-81.0	4.4	32.3	0.0	0.0	0.0	-118.4
6290	641310.52	4749702.57	179.52	0	D	41.1	4.4	32.3	0.0	0.0	0.0	4.4
6290	641310.52	4749702.57	179.52	0	N	44.1	4.4	32.3	0.0	0.0	0.0	7.4
6290	641310.52	4749702.57	179.52	0	E	-81.0	4.4	32.3	0.0	0.0	0.0	-118.5
6300	642002.80	4749737.98	180.50	0	D	41.1	4.0	32.8	0.0	0.6	0.0	3.7
6300	642002.80	4749737.98	180.50	0	N	44.1	4.0	32.8	0.0	0.6	0.0	6.7
6300	642002.80	4749737.98	180.50	0	E	-81.0	4.0	32.8	0.0	0.6	0.0	-119.1
6308	641469.67	4749709.78	179.90	0	D	41.1	4.4	32.4	0.0	0.0	0.0	4.3
6308	641469.67	4749709.78	179.90	0	N	44.1	4.4	32.4	0.0	0.0	0.0	7.3
6308	641469.67	4749709.78	179.90	0	E	-81.0	4.4	32.4	0.0	0.0	0.0	-118.6
6323	641995.10	4749737.65	180.42	0	D	41.1	4.0	32.9	0.0	1.0	0.0	3.2
6323	641995.10	4749737.65	180.42	0	N	44.1	4.0	32.9	0.0	1.0	0.0	6.2
6323	641995.10	4749737.65	180.42	0	E	-81.0	4.0	32.9	0.0	1.0	0.0	-119.6
6330	641459.99	4749709.32	179.90	0	D	41.1	4.4	32.5	0.0	0.0	0.0	4.2
6330	641459.99	4749709.32	179.90	0	N	44.1	4.4	32.5	0.0	0.0	0.0	7.2
6330	641459.99	4749709.32	179.90	0	E	-81.0	4.4	32.5	0.0	0.0	0.0	-118.7
6337	641933.64	4749734.94	180.18	0	D	41.1	4.1	32.9	0.0	2.5	0.0	1.7
6337	641933.64	4749734.94	180.18	0	N	44.1	4.1	32.9	0.0	2.5	0.0	4.7
6337	641933.64	4749734.94	180.18	0	E	-81.0	4.1	32.9	0.0	2.5	0.0	-120.9
6352	641482.99	4749710.42	179.90	0	D	41.1	4.4	32.7	0.0	0.0	0.0	4.0
6352	641482.99	4749710.42	179.90	0	N	44.1	4.4	32.7	0.0	0.0	0.0	7.0
6352	641482.99	4749710.42	179.90	0	E	-81.0	4.4	32.7	0.0	0.0	0.0	-118.9
6446	641440.16	4749708.40	179.90	0	D	41.1	4.5	32.7	0.0	0.0	0.0	3.9
6446	641440.16	4749708.40	179.90	0	N	44.1	4.5	32.7	0.0	0.0	0.0	6.9
6446	641440.16	4749708.40	179.90	0	E	-81.0	4.5	32.7	0.0	0.0	0.0	-118.9
6459	641945.61	4749735.48	180.21	0	D	41.1	4.0	33.3	0.0	3.0	0.0	0.9
6459	641945.61	4749735.48	180.21	0	N	44.1	4.0	33.3	0.0	3.0	0.0	3.9
6459	641945.61	4749735.48	180.21	0	E	-81.0	4.0	33.3	0.0	3.0	0.0	-121.6
6465	641433.90	4749708.12	179.90	0	D	41.1	4.5	32.7	0.0	0.0	0.0	3.9
6465	641433.90	4749708.12	179.90	0	N	44.1	4.5	32.7	0.0	0.0	0.0	6.9
6465	641433.90	4749708.12	179.90	0	E	-81.0	4.5	32.7	0.0	0.0	0.0	-119.0
6470	641445.09	4749708.62	179.90	0	D	41.1	4.5	32.8	0.0	0.0	0.0	3.8
6470	641445.09	4749708.62	179.90	0	N	44.1	4.5	32.8	0.0	0.0	0.0	6.8
6470	641445.09	4749708.62	179.90	0	E	-81.0	4.5	32.8	0.0	0.0	0.0	-119.1

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6482	642054.23	4749740.28	180.52	0	D	41.1	4.0	33.4	0.0	2.0	0.0	1.7
6482	642054.23	4749740.28	180.52	0	N	44.1	4.0	33.4	0.0	2.0	0.0	4.7
6482	642054.23	4749740.28	180.52	0	E	-81.0	4.0	33.4	0.0	2.0	0.0	-121.0
6489	642068.35	4749740.91	180.41	0	D	41.1	4.0	33.2	0.0	2.5	0.0	1.3
6489	642068.35	4749740.91	180.41	0	N	44.1	4.0	33.2	0.0	2.5	0.0	4.3
6489	642068.35	4749740.91	180.41	0	E	-81.0	4.0	33.2	0.0	2.5	0.0	-121.2
6495	641254.46	4749700.06	178.90	0	D	41.1	4.6	32.8	0.0	0.8	0.0	2.8
6495	641254.46	4749700.06	178.90	0	N	44.1	4.6	32.8	0.0	0.8	0.0	5.8
6495	641254.46	4749700.06	178.90	0	E	-81.0	4.6	32.8	0.0	0.8	0.0	-120.0
6518	641989.67	4749737.41	180.33	0	D	41.1	4.0	33.5	0.0	1.5	0.0	2.2
6518	641989.67	4749737.41	180.33	0	N	44.1	4.0	33.5	0.0	1.5	0.0	5.2
6518	641989.67	4749737.41	180.33	0	E	-81.0	4.0	33.5	0.0	1.5	0.0	-120.6
6529	641430.16	4749707.96	179.90	0	D	41.1	4.5	33.1	0.0	0.0	0.0	3.5
6529	641430.16	4749707.96	179.90	0	N	44.1	4.5	33.1	0.0	0.0	0.0	6.5
6529	641430.16	4749707.96	179.90	0	E	-81.0	4.5	33.1	0.0	0.0	0.0	-119.4
6541	641233.92	4749699.22	178.90	0	D	41.1	4.6	33.2	0.0	0.4	0.0	2.8
6541	641233.92	4749699.22	178.90	0	N	44.1	4.6	33.2	0.0	0.4	0.0	5.8
6541	641233.92	4749699.22	178.90	0	E	-81.0	4.6	33.2	0.0	0.4	0.0	-120.0
6572	641448.57	4749708.78	179.90	0	D	41.1	4.5	33.5	0.0	0.0	0.0	3.1
6572	641448.57	4749708.78	179.90	0	N	44.1	4.5	33.5	0.0	0.0	0.0	6.2
6572	641448.57	4749708.78	179.90	0	E	-81.0	4.5	33.5	0.0	0.0	0.0	-119.7
6588	641264.78	4749700.48	179.21	0	D	41.1	4.6	31.6	0.0	0.3	0.0	4.7
6588	641264.78	4749700.48	179.21	0	N	44.1	4.6	31.6	0.0	0.3	0.0	7.7
6588	641264.78	4749700.48	179.21	0	E	-81.0	4.6	31.6	0.0	0.3	0.0	-118.2
6595	640920.06	4749685.09	178.90	0	D	41.1	4.3	34.0	0.0	0.0	0.0	2.8
6595	640920.06	4749685.09	178.90	0	N	44.1	4.3	34.0	0.0	0.0	0.0	5.8
6595	640920.06	4749685.09	178.90	0	E	-81.0	4.3	34.0	0.0	0.0	0.0	-120.0
6599	640904.65	4749684.41	178.90	0	D	41.1	4.7	33.6	0.0	0.0	0.0	2.8
6599	640904.65	4749684.41	178.90	0	N	44.1	4.7	33.6	0.0	0.0	0.0	5.8
6599	640904.65	4749684.41	178.90	0	E	-81.0	4.7	33.6	0.0	0.0	0.0	-120.1
6605	641291.21	4749701.66	179.52	0	D	41.1	4.4	33.8	0.0	0.0	0.0	2.9
6605	641291.21	4749701.66	179.52	0	N	44.1	4.4	33.8	0.0	0.0	0.0	5.9
6605	641291.21	4749701.66	179.52	0	E	-81.0	4.4	33.8	0.0	0.0	0.0	-120.0
6612	641414.20	4749707.28	179.90	0	D	41.1	4.5	33.7	0.0	0.0	0.0	2.9
6612	641414.20	4749707.28	179.90	0	N	44.1	4.5	33.7	0.0	0.0	0.0	5.9
6612	641414.20	4749707.28	179.90	0	E	-81.0	4.5	33.7	0.0	0.0	0.0	-120.0
6624	641260.72	4749700.32	178.90	0	D	41.1	4.6	33.7	0.0	0.9	0.0	1.9
6624	641260.72	4749700.32	178.90	0	N	44.1	4.6	33.7	0.0	0.9	0.0	4.9
6624	641260.72	4749700.32	178.90	0	E	-81.0	4.6	33.7	0.0	0.9	0.0	-120.9
6630	641703.87	4749724.38	180.13	0	D	41.1	4.2	34.2	0.0	0.0	0.0	2.8
6630	641703.87	4749724.38	180.13	0	N	44.1	4.2	34.2	0.0	0.0	0.0	5.8
6630	641703.87	4749724.38	180.13	0	E	-81.0	4.2	34.2	0.0	0.0	0.0	-120.1
6636	641461.44	4749709.39	179.90	0	D	41.1	4.4	34.0	0.0	0.0	0.0	2.7
6636	641461.44	4749709.39	179.90	0	N	44.1	4.4	34.0	0.0	0.0	0.0	5.7
6636	641461.44	4749709.39	179.90	0	E	-81.0	4.4	34.0	0.0	0.0	0.0	-120.2
6642	641224.32	4749698.80	178.90	0	D	41.1	4.2	34.2	0.0	0.0	0.0	2.6
6642	641224.32	4749698.80	178.90	0	N	44.1	4.2	34.2	0.0	0.0	0.0	5.6
6642	641224.32	4749698.80	178.90	0	E	-81.0	4.2	34.2	0.0	0.0	0.0	-120.2
6656	641332.36	4749703.56	179.55	0	D	41.1	4.5	34.1	0.0	0.0	0.0	2.5
6656	641332.36	4749703.56	179.55	0	N	44.1	4.5	34.1	0.0	0.0	0.0	5.5
6656	641332.36	4749703.56	179.55	0	E	-81.0	4.5	34.1	0.0	0.0	0.0	-120.4
6662	641428.30	4749707.88	179.90	0	D	41.1	4.5	34.1	0.0	0.0	0.0	2.5
6662	641428.30	4749707.88	179.90	0	N	44.1	4.5	34.1	0.0	0.0	0.0	5.5
6662	641428.30	4749707.88	179.90	0	E	-81.0	4.5	34.1	0.0	0.0	0.0	-120.4
6741	640758.13	4749681.93	179.42	0	D	41.1	3.1	35.6	0.0	0.0	0.0	2.4
6741	640758.13	4749681.93	179.42	0	N	44.1	3.1	35.6	0.0	0.0	0.0	5.4
6741	640758.13	4749681.93	179.42	0	E	-81.0	3.1	35.6	0.0	0.0	0.0	-120.5
6747	641432.65	4749708.07	179.90	0	D	41.1	4.5	34.2	0.0	0.0	0.0	2.4
6747	641432.65	4749708.07	179.90	0	N	44.1	4.5	34.2	0.0	0.0	0.0	5.4
6747	641432.65	4749708.07	179.90	0	E	-81.0	4.5	34.2	0.0	0.0	0.0	-120.4
6751	641419.80	4749707.52	179.90	0	D	41.1	4.5	34.2	0.0	0.0	0.0	2.4
6751	641419.80	4749707.52	179.90	0	N	44.1	4.5	34.2	0.0	0.0	0.0	5.4
6751	641419.80	4749707.52	179.90	0	E	-81.0	4.5	34.2	0.0	0.0	0.0	-120.5

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6763	642023.39	4749738.89	180.55	0	D	41.1	4.0	34.8	0.0	1.7	0.0	0.7
6763	642023.39	4749738.89	180.55	0	N	44.1	4.0	34.8	0.0	1.7	0.0	3.7
6763	642023.39	4749738.89	180.55	0	E	-81.0	4.0	34.8	0.0	1.7	0.0	-122.1
6785	641167.43	4749696.26	179.67	0	D	41.1	4.4	34.6	0.0	0.0	0.0	2.1
6785	641167.43	4749696.26	179.67	0	N	44.1	4.4	34.6	0.0	0.0	0.0	5.2
6785	641167.43	4749696.26	179.67	0	E	-81.0	4.4	34.6	0.0	0.0	0.0	-120.7
6798	641954.54	4749735.87	180.28	0	D	41.1	4.0	35.1	0.0	2.9	0.0	-0.8
6798	641954.54	4749735.87	180.28	0	N	44.1	4.0	35.1	0.0	2.9	0.0	2.2
6798	641954.54	4749735.87	180.28	0	E	-81.0	4.0	35.1	0.0	2.9	0.0	-123.3
6802	641423.83	4749707.69	179.90	0	D	41.1	4.5	34.5	0.0	0.0	0.0	2.1
6802	641423.83	4749707.69	179.90	0	N	44.1	4.5	34.5	0.0	0.0	0.0	5.1
6802	641423.83	4749707.69	179.90	0	E	-81.0	4.5	34.5	0.0	0.0	0.0	-120.8
6816	641418.67	4749707.47	179.90	0	D	41.1	4.5	34.6	0.0	0.0	0.0	2.0
6816	641418.67	4749707.47	179.90	0	N	44.1	4.5	34.6	0.0	0.0	0.0	5.0
6816	641418.67	4749707.47	179.90	0	E	-81.0	4.5	34.6	0.0	0.0	0.0	-120.9
6822	641949.04	4749735.63	180.24	0	D	41.1	4.0	35.1	0.0	3.0	0.0	-1.0
6822	641949.04	4749735.63	180.24	0	N	44.1	4.0	35.1	0.0	3.0	0.0	2.0
6822	641949.04	4749735.63	180.24	0	E	-81.0	4.0	35.1	0.0	3.0	0.0	-123.5
6828	641462.19	4749709.42	179.90	0	D	41.1	4.4	34.8	0.0	0.0	0.0	1.9
6828	641462.19	4749709.42	179.90	0	N	44.1	4.4	34.8	0.0	0.0	0.0	4.9
6828	641462.19	4749709.42	179.90	0	E	-81.0	4.4	34.8	0.0	0.0	0.0	-121.0
6835	641951.75	4749735.75	180.27	0	D	41.1	4.0	35.3	0.0	3.0	0.0	-1.1
6835	641951.75	4749735.75	180.27	0	N	44.1	4.0	35.3	0.0	3.0	0.0	1.9
6835	641951.75	4749735.75	180.27	0	E	-81.0	4.0	35.3	0.0	3.0	0.0	-123.6
6841	641204.72	4749697.82	178.90	0	D	41.1	4.7	34.6	0.0	0.0	0.0	1.8
6841	641204.72	4749697.82	178.90	0	N	44.1	4.7	34.6	0.0	0.0	0.0	4.8
6841	641204.72	4749697.82	178.90	0	E	-81.0	4.7	34.6	0.0	0.0	0.0	-121.0
6846	642048.53	4749740.02	180.52	0	D	41.1	4.0	35.3	0.0	2.0	0.0	-0.3
6846	642048.53	4749740.02	180.52	0	N	44.1	4.0	35.3	0.0	2.0	0.0	2.7
6846	642048.53	4749740.02	180.52	0	E	-81.0	4.0	35.3	0.0	2.0	0.0	-122.9
6858	641366.77	4749705.10	179.72	0	D	41.1	4.5	35.0	0.0	0.0	0.0	1.7
6858	641366.77	4749705.10	179.72	0	N	44.1	4.5	35.0	0.0	0.0	0.0	4.7
6858	641366.77	4749705.10	179.72	0	E	-81.0	4.5	35.0	0.0	0.0	0.0	-121.2
6865	641372.50	4749705.36	179.73	0	D	41.1	4.4	35.1	0.0	0.0	0.0	1.6
6865	641372.50	4749705.36	179.73	0	N	44.1	4.4	35.1	0.0	0.0	0.0	4.6
6865	641372.50	4749705.36	179.73	0	E	-81.0	4.4	35.1	0.0	0.0	0.0	-121.2
6871	640954.59	4749686.73	178.90	0	D	41.1	4.3	35.3	0.0	0.0	0.0	1.6
6871	640954.59	4749686.73	178.90	0	N	44.1	4.3	35.3	0.0	0.0	0.0	4.6
6871	640954.59	4749686.73	178.90	0	E	-81.0	4.3	35.3	0.0	0.0	0.0	-121.3
6884	641334.53	4749703.66	179.55	0	D	41.1	4.5	35.1	0.0	0.0	0.0	1.5
6884	641334.53	4749703.66	179.55	0	N	44.1	4.5	35.1	0.0	0.0	0.0	4.5
6884	641334.53	4749703.66	179.55	0	E	-81.0	4.5	35.1	0.0	0.0	0.0	-121.3
6940	642278.09	4749750.32	178.90	0	D	41.1	4.0	35.7	0.0	8.2	0.0	-6.7
6940	642278.09	4749750.32	178.90	0	N	44.1	4.0	35.7	0.0	8.2	0.0	-3.7
6940	642278.09	4749750.32	178.90	0	E	-81.0	4.0	35.7	0.0	8.2	0.0	-127.9
6963	640939.22	4749686.00	178.90	0	D	41.1	4.3	35.4	0.0	0.0	0.0	1.4
6963	640939.22	4749686.00	178.90	0	N	44.1	4.3	35.4	0.0	0.0	0.0	4.4
6963	640939.22	4749686.00	178.90	0	E	-81.0	4.3	35.4	0.0	0.0	0.0	-121.4
6968	641891.78	4749732.98	180.26	0	D	41.1	4.1	35.6	0.0	0.3	0.0	1.1
6968	641891.78	4749732.98	180.26	0	N	44.1	4.1	35.6	0.0	0.3	0.0	4.1
6968	641891.78	4749732.98	180.26	0	E	-81.0	4.1	35.6	0.0	0.3	0.0	-121.8
6974	641024.97	4749689.87	178.90	0	D	41.1	4.5	35.3	0.0	0.0	0.0	1.4
6974	641024.97	4749689.87	178.90	0	N	44.1	4.5	35.3	0.0	0.0	0.0	4.4
6974	641024.97	4749689.87	178.90	0	E	-81.0	4.5	35.3	0.0	0.0	0.0	-121.5
6978	642092.95	4749742.02	179.90	0	D	41.1	4.0	35.9	0.0	4.7	0.0	-3.5
6978	642092.95	4749742.02	179.90	0	N	44.1	4.0	35.9	0.0	4.7	0.0	-0.5
6978	642092.95	4749742.02	179.90	0	E	-81.0	4.0	35.9	0.0	4.7	0.0	-125.5
6985	641431.23	4749708.01	179.90	0	D	41.1	4.5	35.5	0.0	0.0	0.0	1.1
6985	641431.23	4749708.01	179.90	0	N	44.1	4.5	35.5	0.0	0.0	0.0	4.1
6985	641431.23	4749708.01	179.90	0	E	-81.0	4.5	35.5	0.0	0.0	0.0	-121.8
6991	641181.21	4749696.89	179.67	0	D	41.1	4.7	35.4	0.0	0.0	0.0	1.0
6991	641181.21	4749696.89	179.67	0	N	44.1	4.7	35.4	0.0	0.0	0.0	4.1
6991	641181.21	4749696.89	179.67	0	E	-81.0	4.7	35.4	0.0	0.0	0.0	-121.8

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7016	641444.13	4749708.58	179.90	0	D	41.1	4.5	35.7	0.0	0.0	0.0	1.0
7016	641444.13	4749708.58	179.90	0	N	44.1	4.5	35.7	0.0	0.0	0.0	4.0
7016	641444.13	4749708.58	179.90	0	E	-81.0	4.5	35.7	0.0	0.0	0.0	-121.9
7023	642107.33	4749742.66	179.90	0	D	41.1	4.0	36.2	0.0	4.7	0.0	-3.7
7023	642107.33	4749742.66	179.90	0	N	44.1	4.0	36.2	0.0	4.7	0.0	-0.7
7023	642107.33	4749742.66	179.90	0	E	-81.0	4.0	36.2	0.0	4.7	0.0	-125.8
7029	642112.04	4749742.88	179.90	0	D	41.1	4.0	36.2	0.0	4.7	0.0	-3.8
7029	642112.04	4749742.88	179.90	0	N	44.1	4.0	36.2	0.0	4.7	0.0	-0.7
7029	642112.04	4749742.88	179.90	0	E	-81.0	4.0	36.2	0.0	4.7	0.0	-125.8
7037	642062.71	4749740.66	180.52	0	D	41.1	4.0	36.2	0.0	2.0	0.0	-1.2
7037	642062.71	4749740.66	180.52	0	N	44.1	4.0	36.2	0.0	2.0	0.0	1.8
7037	642062.71	4749740.66	180.52	0	E	-81.0	4.0	36.2	0.0	2.0	0.0	-123.8
7043	640995.46	4749688.58	178.90	0	D	41.1	4.5	35.9	0.0	0.0	0.0	0.7
7043	640995.46	4749688.58	178.90	0	N	44.1	4.5	35.9	0.0	0.0	0.0	3.7
7043	640995.46	4749688.58	178.90	0	E	-81.0	4.5	35.9	0.0	0.0	0.0	-122.2
7050	641867.43	4749731.84	180.30	0	D	41.1	4.1	36.4	0.0	0.0	0.0	0.6
7050	641867.43	4749731.84	180.30	0	N	44.1	4.1	36.4	0.0	0.0	0.0	3.6
7050	641867.43	4749731.84	180.30	0	E	-81.0	4.1	36.4	0.0	0.0	0.0	-122.3
7057	641228.05	4749698.98	178.90	0	D	41.1	4.6	36.0	0.0	0.1	0.0	0.3
7057	641228.05	4749698.98	178.90	0	N	44.1	4.6	36.0	0.0	0.1	0.0	3.4
7057	641228.05	4749698.98	178.90	0	E	-81.0	4.6	36.0	0.0	0.1	0.0	-122.5
7065	641424.70	4749707.73	179.90	0	D	41.1	4.5	36.3	0.0	0.0	0.0	0.3
7065	641424.70	4749707.73	179.90	0	N	44.1	4.5	36.3	0.0	0.0	0.0	3.3
7065	641424.70	4749707.73	179.90	0	E	-81.0	4.5	36.3	0.0	0.0	0.0	-122.6
7072	640792.73	4749683.68	179.17	0	D	41.1	3.6	35.5	0.0	0.0	0.0	2.0
7072	640792.73	4749683.68	179.17	0	N	44.1	3.6	35.5	0.0	0.0	0.0	5.0
7072	640792.73	4749683.68	179.17	0	E	-81.0	3.6	35.5	0.0	0.0	0.0	-120.9
7080	642088.76	4749741.83	179.90	0	D	41.1	4.0	36.8	0.0	4.7	0.0	-4.4
7080	642088.76	4749741.83	179.90	0	N	44.1	4.0	36.8	0.0	4.7	0.0	-1.4
7080	642088.76	4749741.83	179.90	0	E	-81.0	4.0	36.8	0.0	4.7	0.0	-126.5
7086	641460.81	4749709.36	179.90	0	D	41.1	4.4	36.5	0.0	0.0	0.0	0.1
7086	641460.81	4749709.36	179.90	0	N	44.1	4.4	36.5	0.0	0.0	0.0	3.2
7086	641460.81	4749709.36	179.90	0	E	-81.0	4.4	36.5	0.0	0.0	0.0	-122.7
7093	642073.77	4749741.15	180.30	0	D	41.1	4.0	37.0	0.0	3.0	0.0	-2.9
7093	642073.77	4749741.15	180.30	0	N	44.1	4.0	37.0	0.0	3.0	0.0	0.1
7093	642073.77	4749741.15	180.30	0	E	-81.0	4.0	37.0	0.0	3.0	0.0	-125.3
7107	641441.12	4749708.44	179.90	0	D	41.1	4.5	36.6	0.0	0.0	0.0	0.0
7107	641441.12	4749708.44	179.90	0	N	44.1	4.5	36.6	0.0	0.0	0.0	3.0
7107	641441.12	4749708.44	179.90	0	E	-81.0	4.5	36.6	0.0	0.0	0.0	-122.8
7114	642059.28	4749740.50	180.53	0	D	41.1	4.0	37.1	0.0	2.0	0.0	-2.0
7114	642059.28	4749740.50	180.53	0	N	44.1	4.0	37.1	0.0	2.0	0.0	1.0
7114	642059.28	4749740.50	180.53	0	E	-81.0	4.0	37.1	0.0	2.0	0.0	-124.7
7121	641159.88	4749695.90	179.65	0	D	41.1	4.4	36.8	0.0	0.0	0.0	-0.0
7121	641159.88	4749695.90	179.65	0	N	44.1	4.4	36.8	0.0	0.0	0.0	3.0
7121	641159.88	4749695.90	179.65	0	E	-81.0	4.4	36.8	0.0	0.0	0.0	-122.9
7127	641196.85	4749697.51	178.90	0	D	41.1	4.7	36.5	0.0	0.0	0.0	-0.1
7127	641196.85	4749697.51	178.90	0	N	44.1	4.7	36.5	0.0	0.0	0.0	3.0
7127	641196.85	4749697.51	178.90	0	E	-81.0	4.7	36.5	0.0	0.0	0.0	-122.9
7149	641936.44	4749735.07	180.18	0	D	41.1	4.1	37.2	0.0	2.6	0.0	-2.7
7149	641936.44	4749735.07	180.18	0	N	44.1	4.1	37.2	0.0	2.6	0.0	0.3
7149	641936.44	4749735.07	180.18	0	E	-81.0	4.1	37.2	0.0	2.6	0.0	-125.2
7170	641330.49	4749703.47	179.55	0	D	41.1	4.5	36.8	0.0	0.0	0.0	-0.2
7170	641330.49	4749703.47	179.55	0	N	44.1	4.5	36.8	0.0	0.0	0.0	2.8
7170	641330.49	4749703.47	179.55	0	E	-81.0	4.5	36.8	0.0	0.0	0.0	-123.1
7184	642027.90	4749739.09	180.55	0	D	41.1	4.0	37.4	0.0	1.9	0.0	-2.2
7184	642027.90	4749739.09	180.55	0	N	44.1	4.0	37.4	0.0	1.9	0.0	0.8
7184	642027.90	4749739.09	180.55	0	E	-81.0	4.0	37.4	0.0	1.9	0.0	-124.9
7191	641176.37	4749696.68	179.67	0	D	41.1	4.4	37.0	0.0	0.0	0.0	-0.3
7191	641176.37	4749696.68	179.67	0	N	44.1	4.4	37.0	0.0	0.0	0.0	2.7
7191	641176.37	4749696.68	179.67	0	E	-81.0	4.4	37.0	0.0	0.0	0.0	-123.2
7197	641199.61	4749697.62	178.90	0	D	41.1	4.7	36.8	0.0	0.0	0.0	-0.4
7197	641199.61	4749697.62	178.90	0	N	44.1	4.7	36.8	0.0	0.0	0.0	2.6
7197	641199.61	4749697.62	178.90	0	E	-81.0	4.7	36.8	0.0	0.0	0.0	-123.2

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7212	640815.02	4749684.50	178.90	0	D	41.1	5.6	36.0	0.0	0.0	0.0	-0.5
7212	640815.02	4749684.50	178.90	0	N	44.1	5.6	36.0	0.0	0.0	0.0	2.5
7212	640815.02	4749684.50	178.90	0	E	-81.0	5.6	36.0	0.0	0.0	0.0	-123.4
7221	642307.95	4749751.66	178.90	0	D	41.1	4.0	37.6	0.0	8.5	0.0	-9.0
7221	642307.95	4749751.66	178.90	0	N	44.1	4.0	37.6	0.0	8.5	0.0	-6.0
7221	642307.95	4749751.66	178.90	0	E	-81.0	4.0	37.6	0.0	8.5	0.0	-130.1
7237	642301.41	4749751.37	178.90	0	D	41.1	4.0	37.7	0.0	8.6	0.0	-9.2
7237	642301.41	4749751.37	178.90	0	N	44.1	4.0	37.7	0.0	8.6	0.0	-6.2
7237	642301.41	4749751.37	178.90	0	E	-81.0	4.0	37.7	0.0	8.6	0.0	-130.3
7244	641219.66	4749698.56	178.90	0	D	41.1	4.2	37.5	0.0	0.0	0.0	-0.6
7244	641219.66	4749698.56	178.90	0	N	44.1	4.2	37.5	0.0	0.0	0.0	2.4
7244	641219.66	4749698.56	178.90	0	E	-81.0	4.2	37.5	0.0	0.0	0.0	-123.5
7251	642033.68	4749739.35	180.54	0	D	41.1	4.0	37.7	0.0	1.9	0.0	-2.6
7251	642033.68	4749739.35	180.54	0	N	44.1	4.0	37.7	0.0	1.9	0.0	0.4
7251	642033.68	4749739.35	180.54	0	E	-81.0	4.0	37.7	0.0	1.9	0.0	-125.3
7258	641441.63	4749708.47	179.90	0	D	41.1	4.5	37.3	0.0	0.0	0.0	-0.7
7258	641441.63	4749708.47	179.90	0	N	44.1	4.5	37.3	0.0	0.0	0.0	2.3
7258	641441.63	4749708.47	179.90	0	E	-81.0	4.5	37.3	0.0	0.0	0.0	-123.6
7264	640930.83	4749685.60	178.90	0	D	41.1	4.3	37.5	0.0	0.0	0.0	-0.7
7264	640930.83	4749685.60	178.90	0	N	44.1	4.3	37.5	0.0	0.0	0.0	2.3
7264	640930.83	4749685.60	178.90	0	E	-81.0	4.3	37.5	0.0	0.0	0.0	-123.6
7270	641431.87	4749708.03	179.90	0	D	41.1	4.5	37.5	0.0	0.0	0.0	-0.9
7270	641431.87	4749708.03	179.90	0	N	44.1	4.5	37.5	0.0	0.0	0.0	2.1
7270	641431.87	4749708.03	179.90	0	E	-81.0	4.5	37.5	0.0	0.0	0.0	-123.8
7278	641429.11	4749707.91	179.90	0	D	41.1	4.5	37.5	0.0	0.0	0.0	-0.9
7278	641429.11	4749707.91	179.90	0	N	44.1	4.5	37.5	0.0	0.0	0.0	2.1
7278	641429.11	4749707.91	179.90	0	E	-81.0	4.5	37.5	0.0	0.0	0.0	-123.8
7286	641257.85	4749700.20	178.90	0	D	41.1	4.6	37.4	0.0	0.9	0.0	-1.8
7286	641257.85	4749700.20	178.90	0	N	44.1	4.6	37.4	0.0	0.9	0.0	1.2
7286	641257.85	4749700.20	178.90	0	E	-81.0	4.6	37.4	0.0	0.9	0.0	-124.7
7293	641173.60	4749696.55	179.67	0	D	41.1	4.4	37.7	0.0	0.0	0.0	-1.0
7293	641173.60	4749696.55	179.67	0	N	44.1	4.4	37.7	0.0	0.0	0.0	2.0
7293	641173.60	4749696.55	179.67	0	E	-81.0	4.4	37.7	0.0	0.0	0.0	-123.9
7307	641230.39	4749699.07	178.90	0	D	41.1	4.6	37.6	0.0	0.2	0.0	-1.3
7307	641230.39	4749699.07	178.90	0	N	44.1	4.6	37.6	0.0	0.2	0.0	1.7
7307	641230.39	4749699.07	178.90	0	E	-81.0	4.6	37.6	0.0	0.2	0.0	-124.2
7312	641162.88	4749696.04	179.65	0	D	41.1	4.4	37.9	0.0	0.0	0.0	-1.2
7312	641162.88	4749696.04	179.65	0	N	44.1	4.4	37.9	0.0	0.0	0.0	1.9
7312	641162.88	4749696.04	179.65	0	E	-81.0	4.4	37.9	0.0	0.0	0.0	-124.0
7318	640857.94	4749682.93	178.90	0	D	41.1	8.1	34.3	0.0	0.0	0.0	-1.2
7318	640857.94	4749682.93	178.90	0	N	44.1	8.1	34.3	0.0	0.0	0.0	1.8
7318	640857.94	4749682.93	178.90	0	E	-81.0	8.1	34.3	0.0	0.0	0.0	-124.1
7324	641439.26	4749708.36	179.90	0	D	41.1	4.5	37.9	0.0	0.0	0.0	-1.2
7324	641439.26	4749708.36	179.90	0	N	44.1	4.5	37.9	0.0	0.0	0.0	1.8
7324	641439.26	4749708.36	179.90	0	E	-81.0	4.5	37.9	0.0	0.0	0.0	-124.1
7330	642031.05	4749739.23	180.54	0	D	41.1	4.0	38.5	0.0	1.9	0.0	-3.3
7330	642031.05	4749739.23	180.54	0	N	44.1	4.0	38.5	0.0	1.9	0.0	-0.3
7330	642031.05	4749739.23	180.54	0	E	-81.0	4.0	38.5	0.0	1.9	0.0	-126.0
7339	642120.52	4749743.26	179.81	0	D	41.1	4.0	37.5	0.0	5.0	0.0	-5.3
7339	642120.52	4749743.26	179.81	0	N	44.1	4.0	37.5	0.0	5.0	0.0	-2.3
7339	642120.52	4749743.26	179.81	0	E	-81.0	4.0	37.5	0.0	5.0	0.0	-127.3
7355	642316.20	4749752.03	178.78	0	D	41.1	4.0	37.7	0.0	8.8	0.0	-9.4
7355	642316.20	4749752.03	178.78	0	N	44.1	4.0	37.7	0.0	8.8	0.0	-6.4
7355	642316.20	4749752.03	178.78	0	E	-81.0	4.0	37.7	0.0	8.8	0.0	-130.5
7364	642117.79	4749743.13	179.90	0	D	41.1	4.0	38.9	0.0	4.6	0.0	-6.4
7364	642117.79	4749743.13	179.90	0	N	44.1	4.0	38.9	0.0	4.6	0.0	-3.4
7364	642117.79	4749743.13	179.90	0	E	-81.0	4.0	38.9	0.0	4.6	0.0	-128.5
7371	640840.72	4749683.95	178.90	0	D	41.1	9.0	34.0	0.0	0.0	0.0	-1.9
7371	640840.72	4749683.95	178.90	0	N	44.1	9.0	34.0	0.0	0.0	0.0	1.1
7371	640840.72	4749683.95	178.90	0	E	-81.0	9.0	34.0	0.0	0.0	0.0	-124.8
7378	640946.67	4749686.35	178.90	0	D	41.1	4.3	38.9	0.0	0.0	0.0	-2.1
7378	640946.67	4749686.35	178.90	0	N	44.1	4.3	38.9	0.0	0.0	0.0	1.0
7378	640946.67	4749686.35	178.90	0	E	-81.0	4.3	38.9	0.0	0.0	0.0	-124.9

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7386	642100.01	4749742.34	179.90	0	D	41.1	4.0	39.3	0.0	4.7	0.0	-6.9
7386	642100.01	4749742.34	179.90	0	N	44.1	4.0	39.3	0.0	4.7	0.0	-3.9
7386	642100.01	4749742.34	179.90	0	E	-81.0	4.0	39.3	0.0	4.7	0.0	-128.9
7392	640783.59	4749683.23	179.43	0	D	41.1	3.6	39.7	0.0	0.0	0.0	-2.3
7392	640783.59	4749683.23	179.43	0	N	44.1	3.6	39.7	0.0	0.0	0.0	0.8
7392	640783.59	4749683.23	179.43	0	E	-81.0	3.6	39.7	0.0	0.0	0.0	-125.1
7400	640807.36	4749684.32	178.90	0	D	41.1	5.6	37.9	0.0	0.0	0.0	-2.4
7400	640807.36	4749684.32	178.90	0	N	44.1	5.6	37.9	0.0	0.0	0.0	0.6
7400	640807.36	4749684.32	178.90	0	E	-81.0	5.6	37.9	0.0	0.0	0.0	-125.3
7415	640961.59	4749687.06	178.90	0	D	41.1	4.3	39.5	0.0	0.0	0.0	-2.6
7415	640961.59	4749687.06	178.90	0	N	44.1	4.3	39.5	0.0	0.0	0.0	0.4
7415	640961.59	4749687.06	178.90	0	E	-81.0	4.3	39.5	0.0	0.0	0.0	-125.5
7431	642102.09	4749742.43	179.90	0	D	41.1	4.0	39.8	0.0	4.7	0.0	-7.4
7431	642102.09	4749742.43	179.90	0	N	44.1	4.0	39.8	0.0	4.7	0.0	-4.4
7431	642102.09	4749742.43	179.90	0	E	-81.0	4.0	39.8	0.0	4.7	0.0	-129.4
7437	641998.67	4749737.80	180.45	0	D	41.1	4.0	39.9	0.0	0.8	0.0	-3.6
7437	641998.67	4749737.80	180.45	0	N	44.1	4.0	39.9	0.0	0.8	0.0	-0.6
7437	641998.67	4749737.80	180.45	0	E	-81.0	4.0	39.9	0.0	0.8	0.0	-126.5
7445	642289.46	4749750.83	178.90	0	D	41.1	4.0	39.9	0.0	8.5	0.0	-11.3
7445	642289.46	4749750.83	178.90	0	N	44.1	4.0	39.9	0.0	8.5	0.0	-8.3
7445	642289.46	4749750.83	178.90	0	E	-81.0	4.0	39.9	0.0	8.5	0.0	-132.4
7453	640967.51	4749687.33	178.90	0	D	41.1	4.5	39.5	0.0	0.0	0.0	-2.9
7453	640967.51	4749687.33	178.90	0	N	44.1	4.5	39.5	0.0	0.0	0.0	0.1
7453	640967.51	4749687.33	178.90	0	E	-81.0	4.5	39.5	0.0	0.0	0.0	-125.7
7459	642104.03	4749742.52	179.90	0	D	41.1	4.0	40.0	0.0	4.7	0.0	-7.6
7459	642104.03	4749742.52	179.90	0	N	44.1	4.0	40.0	0.0	4.7	0.0	-4.6
7459	642104.03	4749742.52	179.90	0	E	-81.0	4.0	40.0	0.0	4.7	0.0	-129.6
7467	640885.25	4749683.57	178.90	0	D	41.1	4.5	39.6	0.0	0.0	0.0	-3.0
7467	640885.25	4749683.57	178.90	0	N	44.1	4.5	39.6	0.0	0.0	0.0	0.0
7467	640885.25	4749683.57	178.90	0	E	-81.0	4.5	39.6	0.0	0.0	0.0	-125.8
7475	642097.42	4749742.22	179.90	0	D	41.1	4.0	40.1	0.0	4.7	0.0	-7.6
7475	642097.42	4749742.22	179.90	0	N	44.1	4.0	40.1	0.0	4.7	0.0	-4.6
7475	642097.42	4749742.22	179.90	0	E	-81.0	4.0	40.1	0.0	4.7	0.0	-129.7
7481	641409.22	4749707.07	179.90	0	D	41.1	4.5	39.6	0.0	0.0	0.0	-3.1
7481	641409.22	4749707.07	179.90	0	N	44.1	4.5	39.6	0.0	0.0	0.0	-0.0
7481	641409.22	4749707.07	179.90	0	E	-81.0	4.5	39.6	0.0	0.0	0.0	-125.9
7488	641408.85	4749707.05	179.90	0	D	41.1	4.5	39.7	0.0	0.0	0.0	-3.1
7488	641408.85	4749707.05	179.90	0	N	44.1	4.5	39.7	0.0	0.0	0.0	-0.1
7488	641408.85	4749707.05	179.90	0	E	-81.0	4.5	39.7	0.0	0.0	0.0	-126.0
7495	641221.38	4749698.65	178.90	0	D	41.1	4.2	40.3	0.0	0.0	0.0	-3.4
7495	641221.38	4749698.65	178.90	0	N	44.1	4.2	40.3	0.0	0.0	0.0	-0.4
7495	641221.38	4749698.65	178.90	0	E	-81.0	4.2	40.3	0.0	0.0	0.0	-126.3
7510	640821.97	4749684.59	178.90	0	D	41.1	7.5	37.1	0.0	0.0	0.0	-3.5
7510	640821.97	4749684.59	178.90	0	N	44.1	7.5	37.1	0.0	0.0	0.0	-0.4
7510	640821.97	4749684.59	178.90	0	E	-81.0	7.5	37.1	0.0	0.0	0.0	-126.3
7517	640800.92	4749684.08	178.90	0	D	41.1	3.6	41.0	0.0	0.0	0.0	-3.5
7517	640800.92	4749684.08	178.90	0	N	44.1	3.6	41.0	0.0	0.0	0.0	-0.5
7517	640800.92	4749684.08	178.90	0	E	-81.0	3.6	41.0	0.0	0.0	0.0	-126.4
7524	640894.96	4749684.00	178.90	0	D	41.1	4.7	40.1	0.0	0.0	0.0	-3.6
7524	640894.96	4749684.00	178.90	0	N	44.1	4.7	40.1	0.0	0.0	0.0	-0.6
7524	640894.96	4749684.00	178.90	0	E	-81.0	4.7	40.1	0.0	0.0	0.0	-126.5
7531	641438.68	4749708.34	179.90	0	D	41.1	4.5	40.2	0.0	0.0	0.0	-3.6
7531	641438.68	4749708.34	179.90	0	N	44.1	4.5	40.2	0.0	0.0	0.0	-0.6
7531	641438.68	4749708.34	179.90	0	E	-81.0	4.5	40.2	0.0	0.0	0.0	-126.5
7538	641438.93	4749708.35	179.90	0	D	41.1	4.5	40.3	0.0	0.0	0.0	-3.6
7538	641438.93	4749708.35	179.90	0	N	44.1	4.5	40.3	0.0	0.0	0.0	-0.6
7538	641438.93	4749708.35	179.90	0	E	-81.0	4.5	40.3	0.0	0.0	0.0	-126.5
7550	641178.54	4749696.78	179.68	0	D	41.1	4.4	40.4	0.0	0.0	0.0	-3.7
7550	641178.54	4749696.78	179.68	0	N	44.1	4.4	40.4	0.0	0.0	0.0	-0.6
7550	641178.54	4749696.78	179.68	0	E	-81.0	4.4	40.4	0.0	0.0	0.0	-126.5
7555	641171.63	4749696.45	179.67	0	D	41.1	4.4	40.5	0.0	0.0	0.0	-3.8
7555	641171.63	4749696.45	179.67	0	N	44.1	4.4	40.5	0.0	0.0	0.0	-0.7
7555	641171.63	4749696.45	179.67	0	E	-81.0	4.4	40.5	0.0	0.0	0.0	-126.6

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7560	641201.99	4749697.71	178.90	0	D	41.1	4.7	40.2	0.0	0.0	0.0	-3.8
7560	641201.99	4749697.71	178.90	0	N	44.1	4.7	40.2	0.0	0.0	0.0	-0.8
7560	641201.99	4749697.71	178.90	0	E	-81.0	4.7	40.2	0.0	0.0	0.0	-126.6
7569	642026.14	4749739.01	180.55	0	D	41.1	4.0	41.1	0.0	1.9	0.0	-5.8
7569	642026.14	4749739.01	180.55	0	N	44.1	4.0	41.1	0.0	1.9	0.0	-2.8
7569	642026.14	4749739.01	180.55	0	E	-81.0	4.0	41.1	0.0	1.9	0.0	-128.5
7582	641438.45	4749708.32	179.90	0	D	41.1	4.5	40.7	0.0	0.0	0.0	-4.1
7582	641438.45	4749708.32	179.90	0	N	44.1	4.5	40.7	0.0	0.0	0.0	-1.1
7582	641438.45	4749708.32	179.90	0	E	-81.0	4.5	40.7	0.0	0.0	0.0	-126.9
7589	640845.72	4749683.64	178.90	0	D	41.1	9.3	36.0	0.0	0.0	0.0	-4.1
7589	640845.72	4749683.64	178.90	0	N	44.1	9.3	36.0	0.0	0.0	0.0	-1.1
7589	640845.72	4749683.64	178.90	0	E	-81.0	9.3	36.0	0.0	0.0	0.0	-127.0
7596	642115.79	4749743.04	179.90	0	D	41.1	4.0	41.5	0.0	4.6	0.0	-9.1
7596	642115.79	4749743.04	179.90	0	N	44.1	4.0	41.5	0.0	4.6	0.0	-6.1
7596	642115.79	4749743.04	179.90	0	E	-81.0	4.0	41.5	0.0	4.6	0.0	-131.1
7605	642320.20	4749752.21	178.65	0	D	41.1	4.0	41.5	0.0	9.2	0.0	-13.7
7605	642320.20	4749752.21	178.65	0	N	44.1	4.0	41.5	0.0	9.2	0.0	-10.6
7605	642320.20	4749752.21	178.65	0	E	-81.0	4.0	41.5	0.0	9.2	0.0	-134.6
7611	641434.73	4749708.16	179.90	0	D	41.1	4.5	41.2	0.0	0.0	0.0	-4.5
7611	641434.73	4749708.16	179.90	0	N	44.1	4.5	41.2	0.0	0.0	0.0	-1.5
7611	641434.73	4749708.16	179.90	0	E	-81.0	4.5	41.2	0.0	0.0	0.0	-127.4
7619	640872.77	4749683.01	178.90	0	D	41.1	4.5	41.3	0.0	0.0	0.0	-4.6
7619	640872.77	4749683.01	178.90	0	N	44.1	4.5	41.3	0.0	0.0	0.0	-1.6
7619	640872.77	4749683.01	178.90	0	E	-81.0	4.5	41.3	0.0	0.0	0.0	-127.5
7625	642029.60	4749739.17	180.54	0	D	41.1	4.0	41.7	0.0	1.9	0.0	-6.5
7625	642029.60	4749739.17	180.54	0	N	44.1	4.0	41.7	0.0	1.9	0.0	-3.5
7625	642029.60	4749739.17	180.54	0	E	-81.0	4.0	41.7	0.0	1.9	0.0	-129.2
7632	640863.01	4749682.85	178.90	0	D	41.1	6.5	39.3	0.0	0.0	0.0	-4.7
7632	640863.01	4749682.85	178.90	0	N	44.1	6.5	39.3	0.0	0.0	0.0	-1.7
7632	640863.01	4749682.85	178.90	0	E	-81.0	6.5	39.3	0.0	0.0	0.0	-127.6
7639	642095.90	4749742.15	179.90	0	D	41.1	4.0	41.8	0.0	4.7	0.0	-9.4
7639	642095.90	4749742.15	179.90	0	N	44.1	4.0	41.8	0.0	4.7	0.0	-6.4
7639	642095.90	4749742.15	179.90	0	E	-81.0	4.0	41.8	0.0	4.7	0.0	-131.4
7646	641510.64	4749711.63	180.18	0	D	41.1	4.5	41.4	0.0	0.0	0.0	-4.8
7646	641510.64	4749711.63	180.18	0	N	44.1	4.5	41.4	0.0	0.0	0.0	-1.8
7646	641510.64	4749711.63	180.18	0	E	-81.0	4.5	41.4	0.0	0.0	0.0	-127.7
7654	640866.70	4749682.89	178.90	0	D	41.1	6.5	39.4	0.0	0.0	0.0	-4.8
7654	640866.70	4749682.89	178.90	0	N	44.1	6.5	39.4	0.0	0.0	0.0	-1.8
7654	640866.70	4749682.89	178.90	0	E	-81.0	6.5	39.4	0.0	0.0	0.0	-127.7
7662	642250.12	4749749.07	178.90	0	D	41.1	4.0	41.9	0.0	8.1	0.0	-12.9
7662	642250.12	4749749.07	178.90	0	N	44.1	4.0	41.9	0.0	8.1	0.0	-9.9
7662	642250.12	4749749.07	178.90	0	E	-81.0	4.0	41.9	0.0	8.1	0.0	-134.1
7669	640964.61	4749687.20	178.90	0	D	41.1	4.3	41.7	0.0	0.0	0.0	-4.9
7669	640964.61	4749687.20	178.90	0	N	44.1	4.3	41.7	0.0	0.0	0.0	-1.9
7669	640964.61	4749687.20	178.90	0	E	-81.0	4.3	41.7	0.0	0.0	0.0	-127.7
7675	640875.71	4749683.14	178.90	0	D	41.1	4.5	41.7	0.0	0.0	0.0	-5.0
7675	640875.71	4749683.14	178.90	0	N	44.1	4.5	41.7	0.0	0.0	0.0	-2.0
7675	640875.71	4749683.14	178.90	0	E	-81.0	4.5	41.7	0.0	0.0	0.0	-127.9
7683	640850.52	4749683.30	178.90	0	D	41.1	9.3	36.9	0.0	0.0	0.0	-5.1
7683	640850.52	4749683.30	178.90	0	N	44.1	9.3	36.9	0.0	0.0	0.0	-2.1
7683	640850.52	4749683.30	178.90	0	E	-81.0	9.3	36.9	0.0	0.0	0.0	-128.0
7690	640830.81	4749684.48	178.90	0	D	41.1	7.5	38.8	0.0	0.0	0.0	-5.1
7690	640830.81	4749684.48	178.90	0	N	44.1	7.5	38.8	0.0	0.0	0.0	-2.1
7690	640830.81	4749684.48	178.90	0	E	-81.0	7.5	38.8	0.0	0.0	0.0	-128.0
7696	640878.44	4749683.26	178.90	0	D	41.1	4.5	41.9	0.0	0.0	0.0	-5.2
7696	640878.44	4749683.26	178.90	0	N	44.1	4.5	41.9	0.0	0.0	0.0	-2.2
7696	640878.44	4749683.26	178.90	0	E	-81.0	4.5	41.9	0.0	0.0	0.0	-128.1
7703	642322.78	4749752.33	178.60	0	D	41.1	4.0	41.9	0.0	9.3	0.0	-14.1
7703	642322.78	4749752.33	178.60	0	N	44.1	4.0	41.9	0.0	9.3	0.0	-11.1
7703	642322.78	4749752.33	178.60	0	E	-81.0	4.0	41.9	0.0	9.3	0.0	-135.1
7722	640970.30	4749687.46	178.90	0	D	41.1	4.5	41.8	0.0	0.0	0.0	-5.2
7722	640970.30	4749687.46	178.90	0	N	44.1	4.5	41.8	0.0	0.0	0.0	-2.2
7722	640970.30	4749687.46	178.90	0	E	-81.0	4.5	41.8	0.0	0.0	0.0	-128.1

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7729	641415.00	4749707.31	179.90	0	D	41.1	4.5	42.0	0.0	0.0	0.0	-5.4
7729	641415.00	4749707.31	179.90	0	N	44.1	4.5	42.0	0.0	0.0	0.0	-2.4
7729	641415.00	4749707.31	179.90	0	E	-81.0	4.5	42.0	0.0	0.0	0.0	-128.3
7736	641000.82	4749688.82	178.90	0	D	41.1	4.5	42.4	0.0	0.0	0.0	-5.8
7736	641000.82	4749688.82	178.90	0	N	44.1	4.5	42.4	0.0	0.0	0.0	-2.8
7736	641000.82	4749688.82	178.90	0	E	-81.0	4.5	42.4	0.0	0.0	0.0	-128.7
7742	640825.60	4749684.54	178.90	0	D	41.1	7.5	39.5	0.0	0.0	0.0	-5.8
7742	640825.60	4749684.54	178.90	0	N	44.1	7.5	39.5	0.0	0.0	0.0	-2.8
7742	640825.60	4749684.54	178.90	0	E	-81.0	7.5	39.5	0.0	0.0	0.0	-128.7
7749	641218.19	4749698.49	178.90	0	D	41.1	4.2	42.7	0.0	0.0	0.0	-5.8
7749	641218.19	4749698.49	178.90	0	N	44.1	4.2	42.7	0.0	0.0	0.0	-2.8
7749	641218.19	4749698.49	178.90	0	E	-81.0	4.2	42.7	0.0	0.0	0.0	-128.7
7755	642251.98	4749749.15	178.90	0	D	41.1	4.0	42.9	0.0	8.1	0.0	-13.9
7755	642251.98	4749749.15	178.90	0	N	44.1	4.0	42.9	0.0	8.1	0.0	-10.9
7755	642251.98	4749749.15	178.90	0	E	-81.0	4.0	42.9	0.0	8.1	0.0	-135.1
7763	640833.64	4749684.38	178.90	0	D	41.1	9.0	37.9	0.0	0.0	0.0	-5.8
7763	640833.64	4749684.38	178.90	0	N	44.1	9.0	37.9	0.0	0.0	0.0	-2.8
7763	640833.64	4749684.38	178.90	0	E	-81.0	9.0	37.9	0.0	0.0	0.0	-128.7
7771	640853.21	4749683.12	178.90	0	D	41.1	9.3	37.7	0.0	0.0	0.0	-5.9
7771	640853.21	4749683.12	178.90	0	N	44.1	9.3	37.7	0.0	0.0	0.0	-2.8
7771	640853.21	4749683.12	178.90	0	E	-81.0	9.3	37.7	0.0	0.0	0.0	-128.7
7779	642286.68	4749750.71	178.90	0	D	41.1	4.0	43.0	0.0	8.4	0.0	-14.3
7779	642286.68	4749750.71	178.90	0	N	44.1	4.0	43.0	0.0	8.4	0.0	-11.3
7779	642286.68	4749750.71	178.90	0	E	-81.0	4.0	43.0	0.0	8.4	0.0	-135.4
7792	640881.97	4749683.42	178.90	0	D	41.1	4.5	42.7	0.0	0.0	0.0	-6.1
7792	640881.97	4749683.42	178.90	0	N	44.1	4.5	42.7	0.0	0.0	0.0	-3.1
7792	640881.97	4749683.42	178.90	0	E	-81.0	4.5	42.7	0.0	0.0	0.0	-128.9
7800	642284.03	4749750.59	178.90	0	D	41.1	4.0	43.2	0.0	8.3	0.0	-14.4
7800	642284.03	4749750.59	178.90	0	N	44.1	4.0	43.2	0.0	8.3	0.0	-11.4
7800	642284.03	4749750.59	178.90	0	E	-81.0	4.0	43.2	0.0	8.3	0.0	-135.6
7808	641170.55	4749696.40	179.67	0	D	41.1	4.4	42.9	0.0	0.0	0.0	-6.1
7808	641170.55	4749696.40	179.67	0	N	44.1	4.4	42.9	0.0	0.0	0.0	-3.1
7808	641170.55	4749696.40	179.67	0	E	-81.0	4.4	42.9	0.0	0.0	0.0	-129.0
7814	640991.01	4749688.38	178.90	0	D	41.1	4.5	42.9	0.0	0.0	0.0	-6.3
7814	640991.01	4749688.38	178.90	0	N	44.1	4.5	42.9	0.0	0.0	0.0	-3.3
7814	640991.01	4749688.38	178.90	0	E	-81.0	4.5	42.9	0.0	0.0	0.0	-129.2
7822	640888.44	4749683.72	178.90	0	D	41.1	4.5	43.0	0.0	0.0	0.0	-6.3
7822	640888.44	4749683.72	178.90	0	N	44.1	4.5	43.0	0.0	0.0	0.0	-3.3
7822	640888.44	4749683.72	178.90	0	E	-81.0	4.5	43.0	0.0	0.0	0.0	-129.2
7829	640892.12	4749683.88	178.90	0	D	41.1	4.7	42.7	0.0	0.0	0.0	-6.3
7829	640892.12	4749683.88	178.90	0	N	44.1	4.7	42.7	0.0	0.0	0.0	-3.3
7829	640892.12	4749683.88	178.90	0	E	-81.0	4.7	42.7	0.0	0.0	0.0	-129.2
7836	640828.10	4749684.51	178.90	0	D	41.1	7.5	40.0	0.0	0.0	0.0	-6.3
7836	640828.10	4749684.51	178.90	0	N	44.1	7.5	40.0	0.0	0.0	0.0	-3.3
7836	640828.10	4749684.51	178.90	0	E	-81.0	7.5	40.0	0.0	0.0	0.0	-129.2
7843	640773.22	4749682.72	179.52	0	D	41.1	3.6	43.8	0.0	0.0	0.0	-6.3
7843	640773.22	4749682.72	179.52	0	N	44.1	3.6	43.8	0.0	0.0	0.0	-3.3
7843	640773.22	4749682.72	179.52	0	E	-81.0	3.6	43.8	0.0	0.0	0.0	-129.1
7850	640869.20	4749682.91	178.90	0	D	41.1	6.5	41.2	0.0	0.0	0.0	-6.6
7850	640869.20	4749682.91	178.90	0	N	44.1	6.5	41.2	0.0	0.0	0.0	-3.6
7850	640869.20	4749682.91	178.90	0	E	-81.0	6.5	41.2	0.0	0.0	0.0	-129.4
7856	640778.13	4749682.96	179.52	0	D	41.1	3.6	44.0	0.0	0.0	0.0	-6.6
7856	640778.13	4749682.96	179.52	0	N	44.1	3.6	44.0	0.0	0.0	0.0	-3.5
7856	640778.13	4749682.96	179.52	0	E	-81.0	3.6	44.0	0.0	0.0	0.0	-129.4
7864	642312.13	4749751.85	178.90	0	D	41.1	4.0	43.7	0.0	8.5	0.0	-15.1
7864	642312.13	4749751.85	178.90	0	N	44.1	4.0	43.7	0.0	8.5	0.0	-12.1
7864	642312.13	4749751.85	178.90	0	E	-81.0	4.0	43.7	0.0	8.5	0.0	-136.2
7872	640775.72	4749682.84	179.52	0	D	41.1	3.6	44.4	0.0	0.0	0.0	-6.9
7872	640775.72	4749682.84	179.52	0	N	44.1	3.6	44.4	0.0	0.0	0.0	-3.9
7872	640775.72	4749682.84	179.52	0	E	-81.0	3.6	44.4	0.0	0.0	0.0	-129.8
7880	640890.29	4749683.80	178.90	0	D	41.1	4.5	43.8	0.0	0.0	0.0	-7.1
7880	640890.29	4749683.80	178.90	0	N	44.1	4.5	43.8	0.0	0.0	0.0	-4.1
7880	640890.29	4749683.80	178.90	0	E	-81.0	4.5	43.8	0.0	0.0	0.0	-130.0

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7888	642296.59	4749751.15	178.90	0	D	41.1	4.0	44.3	0.0	8.5	0.0	-15.8
7888	642296.59	4749751.15	178.90	0	N	44.1	4.0	44.3	0.0	8.5	0.0	-12.8
7888	642296.59	4749751.15	178.90	0	E	-81.0	4.0	44.3	0.0	8.5	0.0	-136.9
7899	642292.21	4749750.96	178.90	0	D	41.1	4.0	44.4	0.0	8.5	0.0	-15.8
7899	642292.21	4749750.96	178.90	0	N	44.1	4.0	44.4	0.0	8.5	0.0	-12.8
7899	642292.21	4749750.96	178.90	0	E	-81.0	4.0	44.4	0.0	8.5	0.0	-136.9
7904	641429.42	4749707.93	179.90	0	D	41.1	4.5	44.0	0.0	0.0	0.0	-7.4
7904	641429.42	4749707.93	179.90	0	N	44.1	4.5	44.0	0.0	0.0	0.0	-4.4
7904	641429.42	4749707.93	179.90	0	E	-81.0	4.5	44.0	0.0	0.0	0.0	-130.3
7910	642032.27	4749739.29	180.54	0	D	41.1	4.0	44.6	0.0	1.9	0.0	-9.5
7910	642032.27	4749739.29	180.54	0	N	44.1	4.0	44.6	0.0	1.9	0.0	-6.5
7910	642032.27	4749739.29	180.54	0	E	-81.0	4.0	44.6	0.0	1.9	0.0	-132.2
7917	640770.87	4749682.61	179.53	0	D	41.1	3.6	45.0	0.0	0.0	0.0	-7.6
7917	640770.87	4749682.61	179.53	0	N	44.1	3.6	45.0	0.0	0.0	0.0	-4.5
7917	640770.87	4749682.61	179.53	0	E	-81.0	3.6	45.0	0.0	0.0	0.0	-130.4
7924	641999.47	4749737.84	180.46	0	D	41.1	4.0	44.6	0.0	0.8	0.0	-8.3
7924	641999.47	4749737.84	180.46	0	N	44.1	4.0	44.6	0.0	0.8	0.0	-5.3
7924	641999.47	4749737.84	180.46	0	E	-81.0	4.0	44.6	0.0	0.8	0.0	-131.1
7930	641201.16	4749697.68	178.90	0	D	41.1	4.7	44.3	0.0	0.0	0.0	-7.9
7930	641201.16	4749697.68	178.90	0	N	44.1	4.7	44.3	0.0	0.0	0.0	-4.8
7930	641201.16	4749697.68	178.90	0	E	-81.0	4.7	44.3	0.0	0.0	0.0	-130.7
7937	641434.88	4749708.16	179.90	0	D	41.1	4.5	44.6	0.0	0.0	0.0	-8.0
7937	641434.88	4749708.16	179.90	0	N	44.1	4.5	44.6	0.0	0.0	0.0	-5.0
7937	641434.88	4749708.16	179.90	0	E	-81.0	4.5	44.6	0.0	0.0	0.0	-130.8
7943	642098.62	4749742.27	179.90	0	D	41.1	4.0	45.1	0.0	4.7	0.0	-12.7
7943	642098.62	4749742.27	179.90	0	N	44.1	4.0	45.1	0.0	4.7	0.0	-9.6
7943	642098.62	4749742.27	179.90	0	E	-81.0	4.0	45.1	0.0	4.7	0.0	-134.7
7949	641164.44	4749696.12	179.66	0	D	41.1	4.4	44.8	0.0	0.0	0.0	-8.0
7949	641164.44	4749696.12	179.66	0	N	44.1	4.4	44.8	0.0	0.0	0.0	-5.0
7949	641164.44	4749696.12	179.66	0	E	-81.0	4.4	44.8	0.0	0.0	0.0	-130.9
7955	642293.44	4749751.01	178.90	0	D	41.1	4.0	45.2	0.0	8.5	0.0	-16.7
7955	642293.44	4749751.01	178.90	0	N	44.1	4.0	45.2	0.0	8.5	0.0	-13.7
7955	642293.44	4749751.01	178.90	0	E	-81.0	4.0	45.2	0.0	8.5	0.0	-137.8
7966	642253.28	4749749.21	178.90	0	D	41.1	4.0	45.4	0.0	8.1	0.0	-16.4
7966	642253.28	4749749.21	178.90	0	N	44.1	4.0	45.4	0.0	8.1	0.0	-13.4
7966	642253.28	4749749.21	178.90	0	E	-81.0	4.0	45.4	0.0	8.1	0.0	-137.6
7973	640999.58	4749688.77	178.90	0	D	41.1	4.5	45.3	0.0	0.0	0.0	-8.7
7973	640999.58	4749688.77	178.90	0	N	44.1	4.5	45.3	0.0	0.0	0.0	-5.7
7973	640999.58	4749688.77	178.90	0	E	-81.0	4.5	45.3	0.0	0.0	0.0	-131.5
7979	642114.66	4749742.99	179.90	0	D	41.1	4.0	45.9	0.0	4.6	0.0	-13.5
7979	642114.66	4749742.99	179.90	0	N	44.1	4.0	45.9	0.0	4.6	0.0	-10.5
7979	642114.66	4749742.99	179.90	0	E	-81.0	4.0	45.9	0.0	4.6	0.0	-135.5
7985	642297.75	4749751.21	178.90	0	D	41.1	4.0	46.0	0.0	8.6	0.0	-17.5
7985	642297.75	4749751.21	178.90	0	N	44.1	4.0	46.0	0.0	8.6	0.0	-14.5
7985	642297.75	4749751.21	178.90	0	E	-81.0	4.0	46.0	0.0	8.6	0.0	-138.6
7999	640769.13	4749682.52	179.49	0	D	41.1	3.1	45.1	0.0	0.0	0.0	-7.1
7999	640769.13	4749682.52	179.49	0	N	44.1	3.1	45.1	0.0	0.0	0.0	-4.1
7999	640769.13	4749682.52	179.49	0	E	-81.0	3.1	45.1	0.0	0.0	0.0	-129.9
8007	640880.34	4749683.35	178.90	0	D	41.1	4.5	45.7	0.0	0.0	0.0	-9.0
8007	640880.34	4749683.35	178.90	0	N	44.1	4.5	45.7	0.0	0.0	0.0	-6.0
8007	640880.34	4749683.35	178.90	0	E	-81.0	4.5	45.7	0.0	0.0	0.0	-131.9
8015	642248.70	4749749.01	178.90	0	D	41.1	4.0	46.2	0.0	8.1	0.0	-17.1
8015	642248.70	4749749.01	178.90	0	N	44.1	4.0	46.2	0.0	8.1	0.0	-14.1
8015	642248.70	4749749.01	178.90	0	E	-81.0	4.0	46.2	0.0	8.1	0.0	-138.3
8024	642294.97	4749751.08	178.90	0	D	41.1	4.0	46.3	0.0	8.5	0.0	-17.7
8024	642294.97	4749751.08	178.90	0	N	44.1	4.0	46.3	0.0	8.5	0.0	-14.7
8024	642294.97	4749751.08	178.90	0	E	-81.0	4.0	46.3	0.0	8.5	0.0	-138.8
8037	640870.71	4749682.93	178.90	0	D	41.1	6.5	44.1	0.0	0.0	0.0	-9.5
8037	640870.71	4749682.93	178.90	0	N	44.1	6.5	44.1	0.0	0.0	0.0	-6.5
8037	640870.71	4749682.93	178.90	0	E	-81.0	6.5	44.1	0.0	0.0	0.0	-132.3
8045	640835.47	4749684.27	178.90	0	D	41.1	9.0	41.7	0.0	0.0	0.0	-9.6
8045	640835.47	4749684.27	178.90	0	N	44.1	9.0	41.7	0.0	0.0	0.0	-6.6
8045	640835.47	4749684.27	178.90	0	E	-81.0	9.0	41.7	0.0	0.0	0.0	-132.5

Railway, FTA/FRA, Name: "Gio Rail - Wheel", ID: "GIO_wheel"												
Nr.	X	Y	Z	Refl.	DEN	Lw	Ageo	Aangle	Agr	Ashield	RL	Lr
	(m)	(m)	(m)			dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
8053	642285.22	4749750.64	178.90	0	D	41.1	4.0	47.2	0.0	8.4	0.0	-18.5
8053	642285.22	4749750.64	178.90	0	N	44.1	4.0	47.2	0.0	8.4	0.0	-15.5
8053	642285.22	4749750.64	178.90	0	E	-81.0	4.0	47.2	0.0	8.4	0.0	-139.6
8060	640803.82	4749684.22	178.90	0	D	41.1	3.6	47.7	0.0	0.0	0.0	-10.2
8060	640803.82	4749684.22	178.90	0	N	44.1	3.6	47.7	0.0	0.0	0.0	-7.2
8060	640803.82	4749684.22	178.90	0	E	-81.0	3.6	47.7	0.0	0.0	0.0	-133.1
8066	640848.03	4749683.48	178.90	0	D	41.1	9.3	42.1	0.0	0.0	0.0	-10.2
8066	640848.03	4749683.48	178.90	0	N	44.1	9.3	42.1	0.0	0.0	0.0	-7.2
8066	640848.03	4749683.48	178.90	0	E	-81.0	9.3	42.1	0.0	0.0	0.0	-133.1
8072	640779.81	4749683.05	179.48	0	D	41.1	3.6	44.8	0.0	0.0	0.0	-7.3
8072	640779.81	4749683.05	179.48	0	N	44.1	3.6	44.8	0.0	0.0	0.0	-4.3
8072	640779.81	4749683.05	179.48	0	E	-81.0	3.6	44.8	0.0	0.0	0.0	-130.2
8079	642294.26	4749751.05	178.90	0	D	41.1	4.0	48.4	0.0	8.5	0.0	-19.8
8079	642294.26	4749751.05	178.90	0	N	44.1	4.0	48.4	0.0	8.5	0.0	-16.8
8079	642294.26	4749751.05	178.90	0	E	-81.0	4.0	48.4	0.0	8.5	0.0	-140.9
8085	640949.21	4749686.47	178.90	0	D	41.1	4.3	48.2	0.0	0.0	0.0	-11.3
8085	640949.21	4749686.47	178.90	0	N	44.1	4.3	48.2	0.0	0.0	0.0	-8.3
8085	640949.21	4749686.47	178.90	0	E	-81.0	4.3	48.2	0.0	0.0	0.0	-134.2
8090	642313.24	4749751.90	178.90	0	D	41.1	4.0	48.4	0.0	8.5	0.0	-19.8
8090	642313.24	4749751.90	178.90	0	N	44.1	4.0	48.4	0.0	8.5	0.0	-16.8
8090	642313.24	4749751.90	178.90	0	E	-81.0	4.0	48.4	0.0	8.5	0.0	-140.9
8094	640836.36	4749684.22	178.90	0	D	41.1	9.0	43.5	0.0	0.0	0.0	-11.5
8094	640836.36	4749684.22	178.90	0	N	44.1	9.0	43.5	0.0	0.0	0.0	-8.4
8094	640836.36	4749684.22	178.90	0	E	-81.0	9.0	43.5	0.0	0.0	0.0	-134.3
8098	640864.89	4749682.87	178.90	0	D	41.1	6.5	46.2	0.0	0.0	0.0	-11.6
8098	640864.89	4749682.87	178.90	0	N	44.1	6.5	46.2	0.0	0.0	0.0	-8.6
8098	640864.89	4749682.87	178.90	0	E	-81.0	6.5	46.2	0.0	0.0	0.0	-134.5
8105	642295.66	4749751.11	178.90	0	D	41.1	4.0	48.8	0.0	8.5	0.0	-20.2
8105	642295.66	4749751.11	178.90	0	N	44.1	4.0	48.8	0.0	8.5	0.0	-17.2
8105	642295.66	4749751.11	178.90	0	E	-81.0	4.0	48.8	0.0	8.5	0.0	-141.3
8110	640848.77	4749683.42	178.90	0	D	41.1	9.3	44.1	0.0	0.0	0.0	-12.3
8110	640848.77	4749683.42	178.90	0	N	44.1	9.3	44.1	0.0	0.0	0.0	-9.3
8110	640848.77	4749683.42	178.90	0	E	-81.0	9.3	44.1	0.0	0.0	0.0	-135.1
8117	640836.97	4749684.18	178.90	0	D	41.1	9.0	44.8	0.0	0.0	0.0	-12.8
8117	640836.97	4749684.18	178.90	0	N	44.1	9.0	44.8	0.0	0.0	0.0	-9.7
8117	640836.97	4749684.18	178.90	0	E	-81.0	9.0	44.8	0.0	0.0	0.0	-135.6
8124	642115.00	4749743.01	179.90	0	D	41.1	4.0	50.8	0.0	4.6	0.0	-18.3
8124	642115.00	4749743.01	179.90	0	N	44.1	4.0	50.8	0.0	4.6	0.0	-15.3
8124	642115.00	4749743.01	179.90	0	E	-81.0	4.0	50.8	0.0	4.6	0.0	-140.4
8131	642283.03	4749750.55	178.90	0	D	41.1	4.0	51.0	0.0	8.3	0.0	-22.1
8131	642283.03	4749750.55	178.90	0	N	44.1	4.0	51.0	0.0	8.3	0.0	-19.1
8131	642283.03	4749750.55	178.90	0	E	-81.0	4.0	51.0	0.0	8.3	0.0	-143.3
8138	640837.40	4749684.15	178.90	0	D	41.1	9.0	46.7	0.0	0.0	0.0	-14.6
8138	640837.40	4749684.15	178.90	0	N	44.1	9.0	46.7	0.0	0.0	0.0	-11.6
8138	640837.40	4749684.15	178.90	0	E	-81.0	9.0	46.7	0.0	0.0	0.0	-137.5
8147	642291.43	4749750.92	178.90	0	D	41.1	4.0	52.4	0.0	8.5	0.0	-23.8
8147	642291.43	4749750.92	178.90	0	N	44.1	4.0	52.4	0.0	8.5	0.0	-20.8
8147	642291.43	4749750.92	178.90	0	E	-81.0	4.0	52.4	0.0	8.5	0.0	-144.9
8157	642285.70	4749750.66	178.90	0	D	41.1	4.0	54.3	0.0	8.4	0.0	-25.6
8157	642285.70	4749750.66	178.90	0	N	44.1	4.0	54.3	0.0	8.4	0.0	-22.6
8157	642285.70	4749750.66	178.90	0	E	-81.0	4.0	54.3	0.0	8.4	0.0	-146.8
8164	642285.60	4749750.66	178.90	0	D	41.1	4.0	57.2	0.0	8.4	0.0	-28.5
8164	642285.60	4749750.66	178.90	0	N	44.1	4.0	57.2	0.0	8.4	0.0	-25.5
8164	642285.60	4749750.66	178.90	0	E	-81.0	4.0	57.2	0.0	8.4	0.0	-149.6
8176	642313.56	4749751.91	178.90	0	D	41.1	4.0	57.6	0.0	8.5	0.0	-28.9
8176	642313.56	4749751.91	178.90	0	N	44.1	4.0	57.6	0.0	8.5	0.0	-25.9
8176	642313.56	4749751.91	178.90	0	E	-81.0	4.0	57.6	0.0	8.5	0.0	-150.0

Appendix C STAMSON Output File

Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

Mapleview

SLR Project No.: 241.V13413.00001

November 30, 2023

STAMSON 5.0 NORMAL REPORT Date: 06-11-2023 20:16:58
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: st5.te Time Period: 16 hours
Description: STAMSON Validation - Sample Calculation

Road data, segment # 1: KillalyStW

Car traffic volume : 9730 veh/TimePeriod
Medium truck volume : 216 veh/TimePeriod
Heavy truck volume : 350 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: KillalyStW

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 17.50 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: MainSt

Car traffic volume : 8213 veh/TimePeriod
Medium truck volume : 336 veh/TimePeriod
Heavy truck volume : 536 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: MainSt

Angle1 Angle2 : -45.00 deg 65.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 398.90 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: WestSideRd

Car traffic volume : 7541 veh/TimePeriod
Medium truck volume : 77 veh/TimePeriod
Heavy truck volume : 132 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: WestSideRd

Angle1 Angle2 : -77.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 169.60 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: KillalyStW

Source height = 1.36 m

ROAD (0.00 + 66.36 + 0.00) = 66.36 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	67.03	0.00	-0.67	0.00	0.00	0.00	0.00	66.36

Segment Leq : 66.36 dBA

Results segment # 2: MainSt

Source height = 1.56 m

ROAD (0.00 + 51.81 + 0.00) = 51.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	65	0.00	68.20	0.00	-14.25	-2.14	0.00	0.00	0.00	51.81

Segment Leq : 51.81 dBA

Results segment # 3: WestSideRd

Source height = 1.14 m

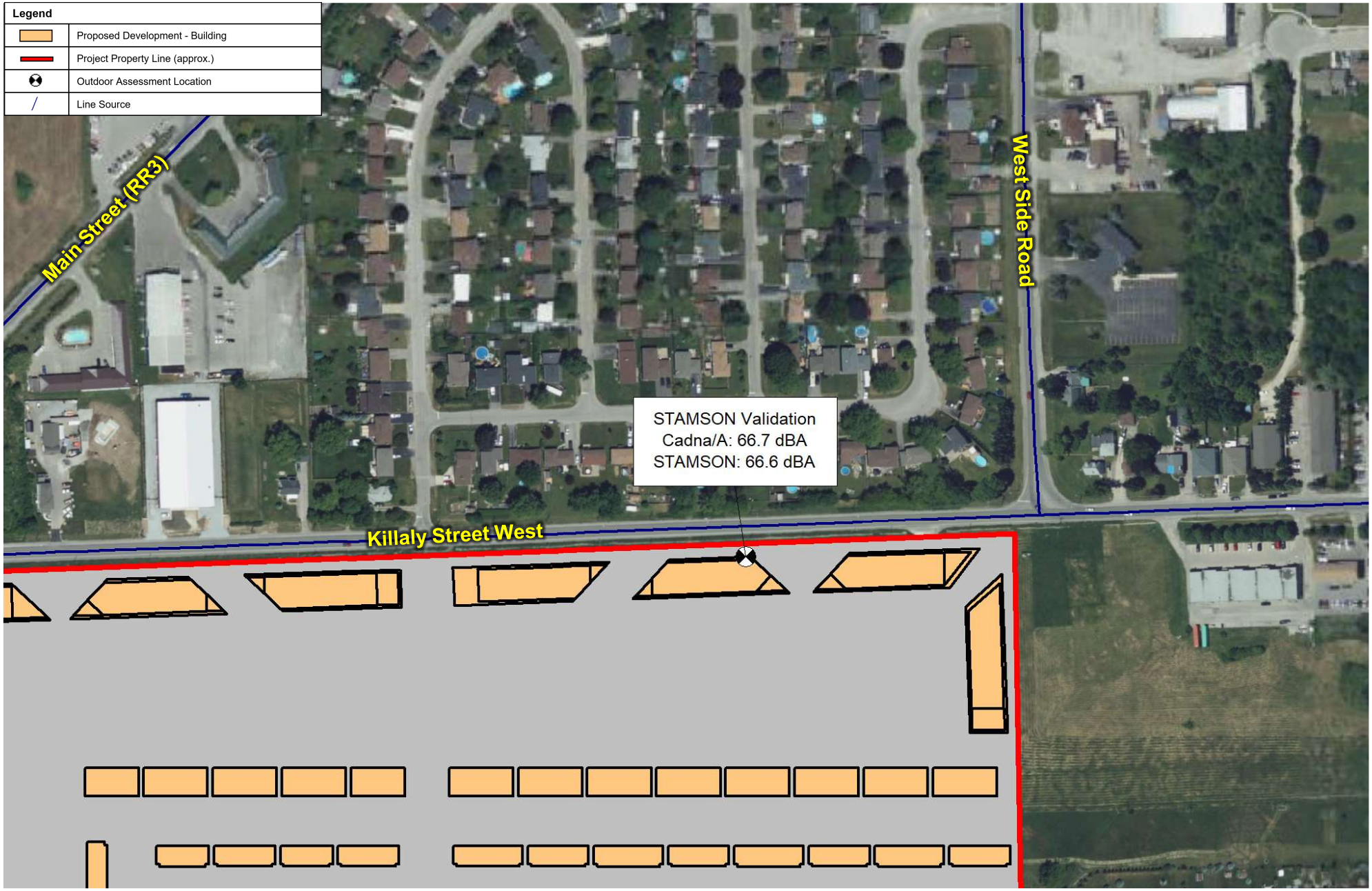
ROAD (0.00 + 48.13 + 0.00) = 48.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-77	0	0.00	62.35	0.00	-10.53	-3.69	0.00	0.00	0.00	48.13

Segment Leq : 48.13 dBA

Total Leq All Segments: 66.57 dBA

TOTAL Leq FROM ALL SOURCES: 66.57



MAPLEVIEW	True North	Scale: 1:3,000	METRES	SLR
KILLALY STREET WEST, PORT COLBORNE		Date: Nov. 30, 2023 Rev 1.0	Figure No. **C.1**	
COMPARISON OF CADNA/A AND STAMSON OUTPUTS –ROAD NOISE		Project No. 241.V13413.00001		

Appendix D Summary Tables – Transportation Noise

Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

Mapleview

SLR Project No.: 241.V13413.00001

November 30, 2023

Appendix D – Summary of Worst-Case Transportation Façade Sound Levels – All Buildings

The following table (**Table D1**) summarizes the maximum predicted sound levels at each building, and the ventilation recommendation.

Table D1: Summary of Transportation Facade Sound Levels for All Buildings

Assessment Location	Building Type	Transportation Sound Levels		Ventilation Recommendation
		L_{eq} Daytime	L_{eq} Nighttime	
Building 01	Mid-Rise	68	62	Central AC
Building 02	Mid-Rise	68	61	Central AC
Building 03	Mid-Rise	67	61	Central AC
Building 04	Mid-Rise	67	61	Central AC
Building 05	Mid-Rise	67	60	Central AC
Building 06	Mid-Rise	67	60	Central AC
Building 07	Mid-Rise	67	60	Central AC
Building 08	Mid-Rise	60	53	Provision for AC
B01	Back-to-Back TH	47	40	None
B02	Back-to-Back TH	46	40	None
B03	Back-to-Back TH	49	43	None
B04	Back-to-Back TH	45	39	None
B05	Back-to-Back TH	46	40	None
B06	Back-to-Back TH	46	39	None
B07	Back-to-Back TH	45	39	None
B08	Back-to-Back TH	46	40	None
B09	Back-to-Back TH	44	40	None
B10	Back-to-Back TH	44	40	None
B11	Back-to-Back TH	44	41	None
B12	Back-to-Back TH	51	46	None
B13	Back-to-Back TH	52	46	None
B14	Back-to-Back TH	52	47	None
B15	Back-to-Back TH	53	47	None
R01	Regular TH	49	43	None
R02	Regular TH	47	41	None
R03	Regular TH	46	40	None
R04	Regular TH	47	40	None
R05	Regular TH	47	41	None
R06	Regular TH	45	39	None
R07	Regular TH	44	38	None
R08	Regular TH	44	38	None
R09	Regular TH	46	40	None

Assessment Location	Building Type	Transportation Sound Levels		Ventilation Recommendation
		L_{eq} Daytime	L_{eq} Nighttime	
R10	Regular TH	46	40	None
R11	Regular TH	48	42	None
R12	Regular TH	54	48	None
R13	Regular TH	52	46	None
R14	Regular TH	52	45	None
R15	Regular TH	51	45	None
R16	Regular TH	52	45	None
R17	Regular TH	52	46	None
R18	Regular TH	46	39	None
R19	Regular TH	49	42	None
R20	Regular TH	53	46	None
R21	Regular TH	53	46	None
R22	Regular TH	51	45	None
R23	Regular TH	51	44	None
R24	Regular TH	51	44	None
R25	Regular TH	50	43	None
R26	Regular TH	47	41	None
R27	Regular TH	46	40	None
R28	Regular TH	44	38	None
R29	Regular TH	46	40	None
R30	Regular TH	47	42	None
R31	Regular TH	46	40	None
R32	Regular TH	45	39	None
R33	Regular TH	46	45	None
R34	Regular TH	43	45	None
R35	Regular TH	43	44	None
R36	Regular TH	45	39	None
R37	Regular TH	45	39	None
R38	Regular TH	45	40	None
R39	Regular TH	42	40	None
R40	Regular TH	44	39	None
R41	Regular TH	44	40	None
R42	Regular TH	44	40	None
R43	Regular TH	43	37	None
R44	Regular TH	43	42	None
R45	Regular TH	44	45	None
R46	Regular TH	42	44	None
R47	Regular TH	45	46	None

Assessment Location	Building Type	Transportation Sound Levels		Ventilation Recommendation
		L_{eq} Daytime	L_{eq} Nighttime	
R48	Regular TH	47	41	None
R49	Regular TH	46	39	None
R50	Regular TH	46	39	None
R51	Regular TH	46	40	None
R52	Regular TH	44	38	None
R53	Regular TH	43	37	None
R54	Regular TH	45	46	None
R55	Regular TH	45	42	None
R56	Regular TH	44	41	None
R57	Regular TH	45	40	None
R58	Regular TH	46	40	None
R59	Regular TH	47	40	None
R60	Regular TH	49	48	None
R61	Regular TH	49	46	None
RL01	Rear-Lane TH	45	39	None
RL02	Rear-Lane TH	46	40	None
RL03	Rear-Lane TH	45	39	None
RL04	Rear-Lane TH	43	39	None
RL05	Rear-Lane TH	43	41	None
RL06	Rear-Lane TH	45	47	None
S01	Stacked TH	52	46	None
S02	Stacked TH	52	45	None
S03	Stacked TH	52	46	None
S04	Stacked TH	53	46	None
S05	Stacked TH	53	47	None
S06	Stacked TH	53	47	None
S07	Stacked TH	52	46	None
S08	Stacked TH	51	45	None
S09	Stacked TH	50	44	None
S10	Stacked TH	50	44	None
S11	Stacked TH	50	44	None
S12	Stacked TH	50	43	None
S13	Stacked TH	54	48	None
SF01	Single-Family Dwelling	46	40	None
SF02	Single-Family Dwelling	43	37	None
SF03	Single-Family Dwelling	43	37	None
SF04	Single-Family Dwelling	43	37	None
SF05	Single-Family Dwelling	43	37	None

Assessment Location	Building Type	Transportation Sound Levels		Ventilation Recommendation
		L_{eq} Daytime	L_{eq} Nighttime	
SF06	Single-Family Dwelling	43	37	None
SF07	Single-Family Dwelling	43	37	None
SF08	Single-Family Dwelling	43	37	None
SF09	Single-Family Dwelling	45	39	None
SF10	Single-Family Dwelling	43	37	None
SF11	Single-Family Dwelling	43	37	None
SF12	Single-Family Dwelling	43	37	None
SF13	Single-Family Dwelling	43	37	None
SF14	Single-Family Dwelling	44	37	None
SF15	Single-Family Dwelling	44	38	None
SF16	Single-Family Dwelling	44	38	None
SF17	Single-Family Dwelling	47	41	None
SF18	Single-Family Dwelling	48	41	None
SF19	Single-Family Dwelling	46	40	None
SF20	Single-Family Dwelling	44	38	None
SF21	Single-Family Dwelling	43	37	None
SF22	Single-Family Dwelling	42	37	None
SF23	Single-Family Dwelling	41	36	None
SF24	Single-Family Dwelling	41	37	None
SF25	Single-Family Dwelling	41	38	None
SF26	Single-Family Dwelling	41	39	None
SF27	Single-Family Dwelling	41	39	None
SF28	Single-Family Dwelling	41	39	None
SF29	Single-Family Dwelling	45	39	None
SF30	Single-Family Dwelling	45	40	None
SF31	Single-Family Dwelling	45	40	None
SF32	Single-Family Dwelling	44	41	None
SF33	Single-Family Dwelling	44	42	None
SF34	Single-Family Dwelling	48	51	Provision for AC
SF35	Single-Family Dwelling	48	51	Provision for AC
SF36	Single-Family Dwelling	48	51	Provision for AC
SF37	Single-Family Dwelling	48	51	Provision for AC
SF38	Single-Family Dwelling	48	51	Provision for AC
SF39	Single-Family Dwelling	48	51	Provision for AC
SF40	Single-Family Dwelling	48	51	Provision for AC
SF41	Single-Family Dwelling	48	51	Provision for AC
SF42	Single-Family Dwelling	48	51	Provision for AC
SF43	Single-Family Dwelling	48	51	Provision for AC

Assessment Location	Building Type	Transportation Sound Levels		Ventilation Recommendation
		L_{eq} Daytime	L_{eq} Nighttime	
SF44	Single-Family Dwelling	48	49	None
SF45	Single-Family Dwelling	42	41	None
SF46	Single-Family Dwelling	42	38	None
SF47	Single-Family Dwelling	42	36	None
SF48	Single-Family Dwelling	42	37	None
SF49	Single-Family Dwelling	43	39	None
SF50	Single-Family Dwelling	42	36	None
SF51	Single-Family Dwelling	42	37	None
SF52	Single-Family Dwelling	43	37	None
SF53	Single-Family Dwelling	43	38	None
SF54	Single-Family Dwelling	44	43	None
SF55	Single-Family Dwelling	44	47	None
SF56	Single-Family Dwelling	44	47	None
SF57	Single-Family Dwelling	44	47	None
SF58	Single-Family Dwelling	44	47	None
SF59	Single-Family Dwelling	44	47	None
SF60	Single-Family Dwelling	44	47	None
SF61	Single-Family Dwelling	44	47	None
SF62	Single-Family Dwelling	44	47	None
SF63	Single-Family Dwelling	44	47	None
SF64	Single-Family Dwelling	44	47	None
SF65	Single-Family Dwelling	51	44	None
SF66	Single-Family Dwelling	51	45	None
SF67	Single-Family Dwelling	51	45	None
SF68	Single-Family Dwelling	52	45	None
SF69	Single-Family Dwelling	51	46	None
SF70	Single-Family Dwelling	50	46	None
SF71	Single-Family Dwelling	48	47	None
SF72	Single-Family Dwelling	49	49	None
SF73	Single-Family Dwelling	50	49	None
SF74	Single-Family Dwelling	50	49	None
SF75	Single-Family Dwelling	50	49	None
SF76	Single-Family Dwelling	50	49	None
SF77	Single-Family Dwelling	50	49	None
SF78	Single-Family Dwelling	46	49	None
SF79	Single-Family Dwelling	46	49	None
SF80	Single-Family Dwelling	46	49	None
SF81	Single-Family Dwelling	46	49	None

Assessment Location	Building Type	Transportation Sound Levels		Ventilation Recommendation
		L_{eq} Daytime	L_{eq} Nighttime	
SF82	Single-Family Dwelling	46	49	None
SF83	Single-Family Dwelling	46	49	None
SF84	Single-Family Dwelling	47	49	None
SF85	Single-Family Dwelling	47	50	None
SF86	Single-Family Dwelling	47	50	None
SF87	Single-Family Dwelling	47	50	None
SF88	Single-Family Dwelling	47	50	None
SF89	Single-Family Dwelling	47	50	None
SF90	Single-Family Dwelling	47	50	None
SF91	Single-Family Dwelling	47	50	None
SF92	Single-Family Dwelling	47	50	None
SF93	Single-Family Dwelling	47	50	None
SF94	Single-Family Dwelling	47	50	None
SF95	Single-Family Dwelling	47	50	None
SF96	Single-Family Dwelling	47	50	None

Appendix E Ventilation, Warning Clause and Mitigation Summary

Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

Mapleview

SLR Project No.: 241.V13413.00001

November 30, 2023

Appendix E Ventilation, Warning Clause and Mitigation Summary

The following warning clauses are recommended for inclusion in agreements registered on Title for the residential units and included in all agreements of purchase and sale or lease, and all rental agreements.

A summary of the warning clause, ventilation and mitigation recommendations is included in **Table E1**.

> **MECP Type A:** “Purchasers/tenants are advised that sound levels due to increasing road traffic (rail traffic) (air traffic) may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.”
>
> **MECP Type C:** “This dwelling unit has been designed with the provision for central air conditioning at the occupant’s discretion. Installation of central air conditioning by the occupant in low and medium density developments will allows windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment.”
>
> **MECP Type D:** “This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment.”

Table E1: Summary of Ventilation, Warning Clause and Mitigation Recommendations

Development Location/Building	Barrier Recommendations	Ventilation Recommendations	Warning Clause Recommendations
Building 01	None	Central AC	Type A, Type D
Building 02	None	Central AC	Type A, Type D
Building 03	None	Central AC	Type D
Building 04	None	Central AC	Type D
Building 05	None	Central AC	Type D
Building 06	None	Central AC	Type D
Building 07	None	Central AC	Type D
Building 08	None	Provision for AC	Type C
Single Family Dwelling 34	None	Provision for AC	Type C
Single Family Dwelling 35	None	Provision for AC	Type C
Single Family Dwelling 36	None	Provision for AC	Type C
Single Family Dwelling 37	None	Provision for AC	Type C
Single Family Dwelling 38	None	Provision for AC	Type C
Single Family Dwelling 39	None	Provision for AC	Type C
Single Family Dwelling 40	None	Provision for AC	Type C
Single Family Dwelling 41	None	Provision for AC	Type C
Single Family Dwelling 42	None	Provision for AC	Type C
Single Family Dwelling 43	None	Provision for AC	Type C
All Other Lots	None	None	None

Appendix F Sample Calculation – Rail Vibration

Environmental Noise and Vibration Assessment

Killaly Street West, Port Colborne

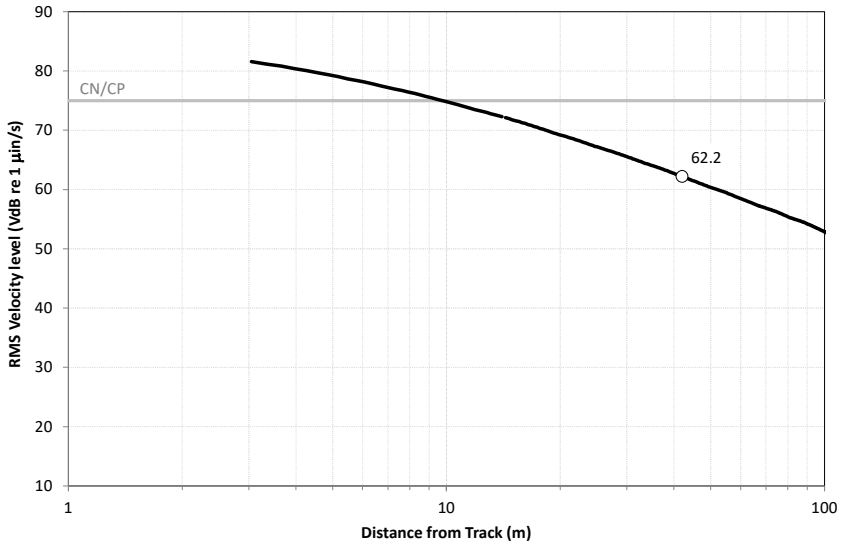
Mapleview

SLR Project No.: 241.V13413.00001

November 30, 2023

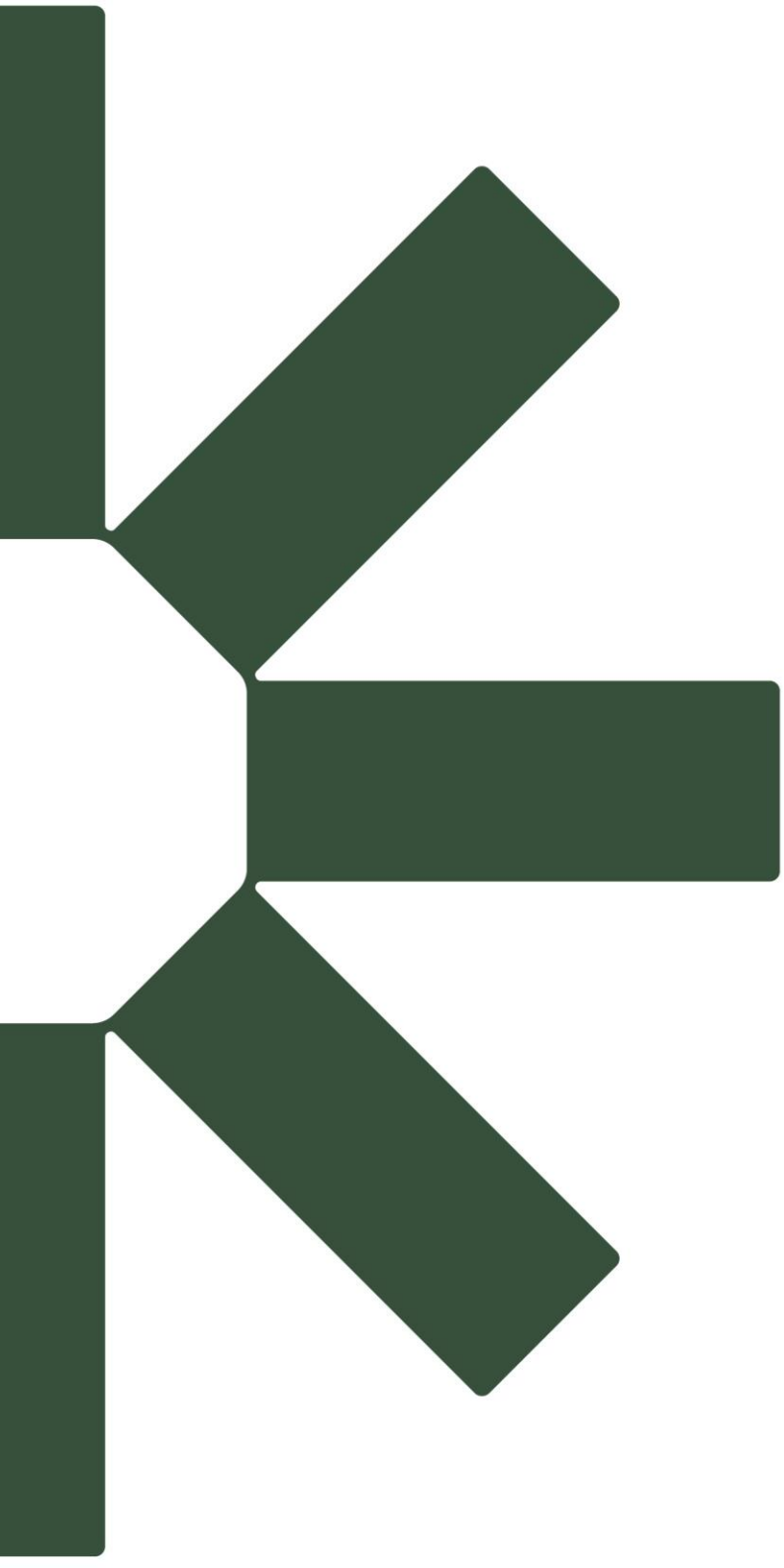
FTA MODEL FOR RAIL VIBRATION PREDICTION

Project Name:	Mapleview, Port Colborne			
Project Number:	241.V13413.00001			
Model Condition:	Southern Portion of Site - Single Family Dwellings			
Source Info				
Vehicle Speed	10.0	mph	16.1	km/hr
Base Curve Selection	Locomotive			
Reference Speed	50	mph	80.5	km/hr
Receptor Distance	137.7	ft	42.0	m
Source Level	75.2	VdB	5772	µin/s
Speed Adjustment	-14.0	VdB	0.2	µin/s
Vehicle Parameters (not additive, apply greatest value only)				
Vehicle Parameter	None			
Adjustment	0.0	VdB		µin/s
Track Conditions (not additive, apply greatest value only)				
Track Parameter	None			
Adjustment	0.0	VdB		µin/s
Track Treatments (not additive, apply greatest value only)				
Track Treatment	None			
Adjustment	0.0	VdB		µin/s
Track Configuration Effects (not additive, apply greatest value only)				
At-grade tie & ballast	None			
Adjustment	0.0	VdB		µin/s
Bored Tunnel	None			
Adjustment	0.0	VdB		µin/s
Ground-borne Propagation Effects				
Geology	None			
Adjustment	0.0	VdB		µin/s
Coupling to Building Foundation	Wood Frame House			
Adjustment	-5.0	VdB	0.6	µin/s
Receiver Effects				
Floor-to-floor Attenuation	At grade			
Adjustment	0.0	VdB		µin/s
Resonance Amplification?	Yes			
Adjustment	6.0	VdB	2.0	µin/s
TOTAL ADJUSTMENT	**-13.0**	VdB		
ESTIMATED VIBRATION RECEIVER LEVEL	**62.2**	VdB	0.033	mm/s



Vibration Criteria

				D_{crit}		D_{crit}	
1	CN/CP	75	VdB	10	m	32	ft
2					m		ft
3					m		ft
4					m		ft
5					m		ft
6					m		ft
7					m		ft
8					m		ft



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