Link Union Station

Draft Noise and Vibration Study *June 2024*



The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.





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ACRONYMS

ADA BNSF	Americans with Disabilities Act BNSF Railway
dB	decibel
dBA	A-weighted decibel
CBC	California Building Code
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CHSRA	California High Speed Rail Authority
CNEL	Community Noise Equivalent Level
CP	Control Point
EIS	Environmental Impact Statement
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
HSR	High-Speed Rail
ID	identification
LAUS	Los Angeles Union Station
L_{dn}	day-night sound level
L_{eq}	equivalent noise level
Link US	Link Union Station
L _{max}	maximum sound level
Metro	Los Angeles County Metropolitan Transportation Authority
ML	monitoring location
MOU	memorandum of understanding
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
PEIR	Program Environmental Impact Report
Project	Link Union Station Project
PPV	peak particle velocity
PTC	Positive Train Control
ROW	Right-of-Way
RTP	Regional Transportation Plan
SCAG	Southern California Association Of Governments
SCS	Sustainable Communities Strategy
VCEs	Vertical Clearance Elements
VdB	Vibration velocity level in decibels





U.S.	United States
USC	United States Code
US-101	United States Highway 101





Executive Summary

This noise and vibration study was prepared pursuant to the National Environmental Policy Act (NEPA) to determine the short-term construction and long-term noise and vibration effects resulting from the No Action Alternative and the Build Alternative and identify mitigation measures to reduce the potential for adverse effects related to noise and vibration.

The Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* (FTA 2018) manual, Federal Railroad Administration's (FRA) *High-Speed Ground Transportation Noise and Vibration Impact Assessment* (FRA 2012) manual, FRA's Procedures for Considering Environmental Impacts [*Federal Register* 64 (3): 28555, May 26, 1999], and California High-Speed Rail Authority's (CHSRA) Environmental Methodology Guidelines (CHSRA 2014) were implemented as the methodology to evaluate the noise and vibration impacts of the regional/intercity rail and high-speed rail (HSR) components of the Link Union Station (Link US) Project (Project or proposed action), respectively.

To provide a baseline for the evaluation, noise and vibration measurements were conducted at monitoring locations associated with sensitive land uses in the vicinity of Los Angeles Union Station (LAUS) where sensitive receptors occur near proposed infrastructure. The sensitive receptor locations were used for predictions and represent a cluster of sensitive receptors, consistent with FTA/FRA guidance and regulations. The measurements identified that noise and vibration levels in the Project study area are consistent with those located near active rail lines and in urban environments.

Operational noise and vibration levels were analyzed for the Build Alternative in 2026, 2031, and 2040 conditions. A summary of the operational noise impacts is as follows:

- In the 2026 condition, 24 moderate noise impacts would occur (all William Mead Homes dwelling units) and no severe impacts would occur.
- In the 2031 condition, 34 moderate impacts would occur (16 dwelling units at William Mead Homes, 3 dwelling units at Mozaic Apartments, and 15 dwelling units at Care First Village) and 35 severe noise impacts would occur (24 dwelling units at William Mead Homes, 10 dwelling units at Care First Village, and one park at William Mead Homes).
- In the 2040 condition, 25 moderate impacts would occur (16 dwelling units at William Mead Homes and 9 dwelling units at Mozaic Apartments) and 35 severe impacts would occur (24 dwelling units at William Mead Homes, 10 dwelling units at Care First Village, and one park at William Mead Homes)

A summary of the long-term operational noise impacts for each of the receptors is below:

• Related to William Mead Homes and the Care First Village, severe impacts in the 2031 condition is considered an adverse effect. Implementation of Mitigation Measure NV-1





(described in Section 11.1) would reduce adverse operational noise impacts by reducing noise levels lower than the FTA severe impact criteria.

- For the Mozaic Apartments, exterior noise levels at the Mozaic Apartments would result in moderate noise impacts at three dwelling units, specifically at the balconies of the units located closest to LAUS. Mitigation measures are not proposed because severe impacts would not occur and the exterior areas (balconies) of the Mozaic Apartments are already exposed to relatively high existing noise levels from transit and railroad operations located at LAUS. The Mozaic Apartments were recently constructed in 2005 and as part of the planning process, the developer was required to design the development in accordance with City of Los Angeles Municipal Code, Section 91.1207.14.2 since it is located in close proximity to railroad tracks. The City's code requires that new buildings located in close proximity to train tracks be constructed in such a manner to ensure interior sound levels are 45 dBA L_{dn} or lower. With or without implementation of the Build Alternative, interior sound levels are assumed to be 45 A-weighted decibel (dBA) day-night sound level (L_{dn}) or lower because noise attenuation measures in the form of thick pane windows and concrete structures (as opposed to other noise absorbing materials) are already in place, as required by the City of Los Angeles. As with the existing train movements at LAUS. with the Build Alternative, the majority (e.g., over 80 percent) of the train movements would occur during daytime hours during the peak-period, rather than during nighttime hours when rail activity could result in greater sleep disturbance. For these reasons, effects would not be considered adverse.
- The Los Angeles County Men's Central Jail and the Twin Towers Correctional Facility do not have outdoor uses and are not predicted to be subjected to noise levels that exceed severe or moderate noise limits. Additionally, these two facilities are comprised of buildings made from concrete with thick windows. Consistent with Federal Highway Administration guidance for interior sound level attenuation, interior noise levels during operation of are estimated to be at least 20 decibels (dB) lower than those experienced at the exterior of these structures with windows closed, which would be similar for railroad noise sources (Federal Highway Administration 2011). Interior noise levels would be below 45 dBA L_{dn}, which is a level that the United States (U.S.) Environmental Protection Agency has identified as a level that does not interfere with interior activities (e.g., speech and sleeping), and interior noise levels at the facilities would be 45 dBA L_{dn} or lower for the same reasons described above. Based on these considerations, effects would not be considered adverse.
- For Los Angeles County Metropolitan Transportation Authority (Metro) Senior Housing, La Petite Academy, and One Santa Fe Apartments, no moderate or severe impacts were identified. No adverse effect would occur.

No operational vibration impacts would result from the Build Alternative.

Construction-related noise associated with the Build Alternative would exceed FTA's construction noise guidelines at sensitive receptors nearest to the Build Alternative, resulting in an adverse





effect on William Mead Homes, Care First Village Mozaic Apartments, and the Metro Gateway Childhood Development Center. the following Category 2 and 3 land uses would be subject to construction noise that exceeds the City's 75 dBA limit:

- William Mead Homes 41 dwelling units and one recreational use;
- Care First Village approximately 36 dwelling units and a playground/park;
- Mozaic Apartments 82 dwelling units; and,
- Metro Gateway Childhood Development Center.

Mitigation Measure NV-2 (described in Section 11.2) includes provisions for construction of temporary noise barriers around stationary equipment; rerouting truck traffic away from residential areas; siting stationary construction equipment as far away from sensitive land uses as practicable; sequencing construction such that construction activities are conducted during the same time period; avoidance of nighttime construction activities; and use of alternative construction methods, such as drilled piles instead of impact piles in the vicinity of sensitive receptors to reduce construction-related noise. Although mitigation would reduce construction noise, noise levels would still exceed applicable thresholds in some areas. Therefore, effects would remain adverse.

Construction-related vibration impacts resulting from the Build Alternative are also predicted to occur at William Mead Homes, Care First Village, and the Mozaic Apartments. Mitigation for construction-related vibration impacts would be similar to that for construction-related noise. Implementation of Mitigation Measures NV-2 and NV-3 (described in Section 11.2) would reduce the potential for adverse construction-related noise and vibration impacts to occur, as well as associated annoyance related to construction-related noise and vibration.









1.0 Introduction

The Los Angeles County Metropolitan Transportation Authority (Metro), as the owner of Los Angeles Union Station (LAUS), is proposing the infrastructure improvements associated with the Link Union Station (Link US) Project (Project or proposed action) to address existing capacity constraints at LAUS. For the purposes of the National Environmental Policy Act (NEPA), Metro is serving as the local Project sponsor and joint lead agency.

Pursuant to 23 United States Code (USC) Section 327 and a memorandum of understanding (MOU) between the Federal Railroad Administration (FRA) and the State of California, effective July 23, 2019, under a program known as NEPA Assignment, the California High-Speed Rail Authority (CHSRA) is responsible for the federal review and approval of environmental documents for projects on the high-speed rail (HSR) system and other passenger rail projects that directly connect to the HSR system, including the Link US Project. For the purposes of the environmental impact statement (EIS) being prepared, CHSRA is serving as the federal lead agency with NEPA responsibilities pursuant to the requirements of the NEPA Assignment MOU. CHSRA and Metro are preparing the EIS in compliance with NEPA (42 USC Section 4321 et seq.), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), FRA's Procedures for Considering Environmental Impacts (FRA's Environmental Procedures) (*Federal Register* [FR] 64(101), 28545-28556, May 26, 1999), 23 USC Section 139, and the NEPA Assignment MOU.¹¹²

Pursuant to the MOU requirements between FRA and the State of California, FRA's Environmental Procedures are being used to determine environmental effects of the No Action Alternative and the Build Alternative.

Below is an overview of the purpose and need, the Project study area, the No Action Alternative, and the major components associated with the on-site infrastructure improvements proposed at and within the vicinity of LAUS that are associated with the Build Alternative considered in the EIS.

² The CEQ issued new regulations, effective April 20, 2022, updating the NEPA implementing procedures at 40 CFR Parts 1500–1508. However, because this environmental document was initiated prior to the effective date, it is not subject to the new regulations and CHSRA is relying on the regulations as they existed on the date of the initial Notice of Intent, May 31, 2016. Therefore, all citations to CEQ regulations in this environmental document refer to the 1978 regulations and the 1986 amendment, 51 *Federal Register* 15618 (April 25, 1986).





While this environmental document was being prepared, FRA adopted new NEPA compliance regulations (23 CFR 771). Those regulations only apply to actions initiated after November 28, 2018. See 23 CFR 771.109(a)(4). Because this environmental document was initiated prior to that date, it remains subject to FRA's Environmental Procedures rather than the Part 771 regulations.

1.1 Purpose

The purpose of the proposed action is to increase the regional and intercity rail service capacity of LAUS and to improve schedule reliability at LAUS through the implementation of a run-through tracks configuration and elimination of the current stub end tracks configuration while preserving current levels of freight rail operations, accommodating the planned HSR system in Southern California, increasing the passenger/pedestrian capacity and enhancing the safety of LAUS through the implementation of a new passenger concourse, meeting the multi-modal transportation demands at LAUS.

1.2 Need

The need for the proposed action is generated by the forecasted increase in regional population and employment; implementation of federal, state, and regional transportation plans (RTP) that provide for increased operational frequency for regional and intercity trains; and introduction of the planned HSR system in Southern California. Localized operational, safety, and accessibility upgrades in and around LAUS will be required to meet existing demand and future growth.

1.3 **Project Location and Study Area**

The Build Alternative consists of infrastructure improvements in Downtown Los Angeles in the vicinity of LAUS (Figure 1-1). LAUS is located at 800 Alameda Street in the City of Los Angeles, California. LAUS is bounded by United States Highway 101 (US-101) to the south, Alameda Street to the west, Cesar Chavez Avenue to the north, and Vignes Street to the east. The northern Project limit is at North Main Street (Mile Post 1.18) and the southern Project limit is in the vicinity of Control Point (CP) Olympic, south of Interstate 10 and Olympic Boulevard (Mile Post 142.70).

Figure 1-2 depicts the Project study area, which is generally used to characterize the affected environment, unless otherwise specified, and provide a geographic context for the existing and proposed infrastructure improvements at and within the vicinity of LAUS. The Project study area includes three main segments (Segment 1: Throat Segment, Segment 2: Concourse Segment, and Segment 3: Run-Through Segment). The existing conditions within each segment are summarized north to south below:

 Segment 1: Throat Segment – This segment, known as the LAUS throat, includes CP Chavez and the area north of the platforms at the LAUS rail yard, from North Main Street at the north to Cesar Chavez Avenue at the south. In the throat segment, all arriving and departing trains are required to traverse through a complex network of lead tracks, switches, and crossovers. Five lead tracks provide access into and out of the rail yard, except for one location near the Vignes Street Bridge, where it reduces to four lead tracks. Currently, special track work consisting of multiple turnouts and double-slip switches are used in the throat to direct trains into and out of the appropriate assigned terminal platform tracks. The Garden Tracks (stub-end tracks where private train cars are currently stored) are also located just north of the platforms. Land uses in the vicinity of the throat segment are residential, industrial, and institutional.





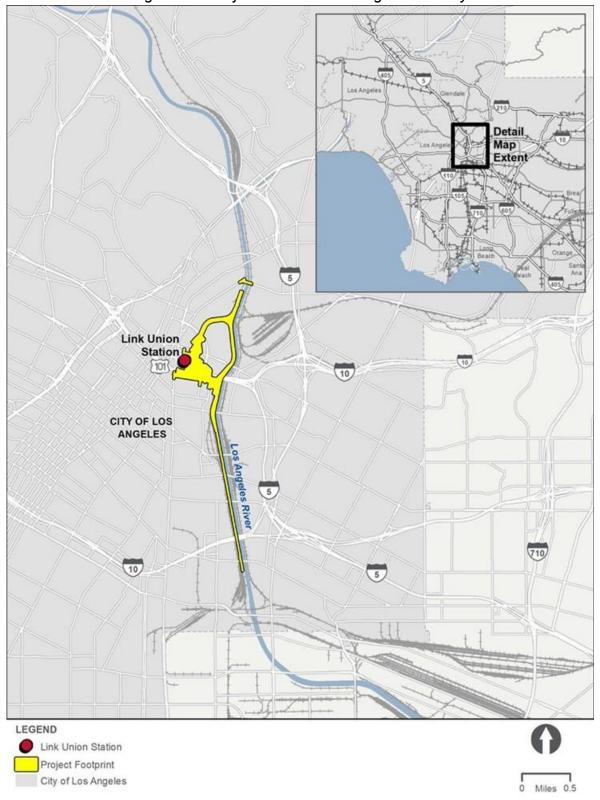
- Segment 2: Concourse Segment This segment is between Cesar Chavez Avenue and US-101 and includes LAUS, the rail yard, the East Portal Building, the baggage handling building with associated parking areas and access roads, the ticketing/waiting halls, and the 28-foot-wide pedestrian passageway with connecting ramps and stairways below the rail yard. Land uses in the vicinity of the concourse segment are residential, commercial, and public.
- Segment 3: Run-Through Segment This segment is south of LAUS and extends east to west from Alameda Street to the west bank of the Los Angeles River and north to south from Keller Yard to CP Olympic. This segment includes US-101, the Commercial Street/Ducommun Street corridor, Metro Red and Purple Lines Maintenance Yard (Division 20 Rail Yard), BNSF Railway (BNSF) West Bank Yard, Keller Yard, the main line tracks on the west bank of the Los Angeles River from Keller Yard to CP Olympic, and the Amtrak lead track connecting the main line tracks with Amtrak's Los Angeles Maintenance Facility in the vicinity of 8th Street. Land uses in the vicinity of the run-through segment are primarily industrial and manufacturing.

The Project study area has a dense street network ranging from major highways to local city streets. The roadways within the Project study area include the El Monte Busway, US-101, Bolero Lane, Leroy Street, Bloom Street, Cesar Chavez Avenue, Commercial Street, Ducommun Street, Jackson Street, East Temple Street, Banning Street, First Street, Alameda Street, Garey Street, Vignes Street, Main Street, Aliso Street, Avila Street, Bauchet Street, and Center Street.









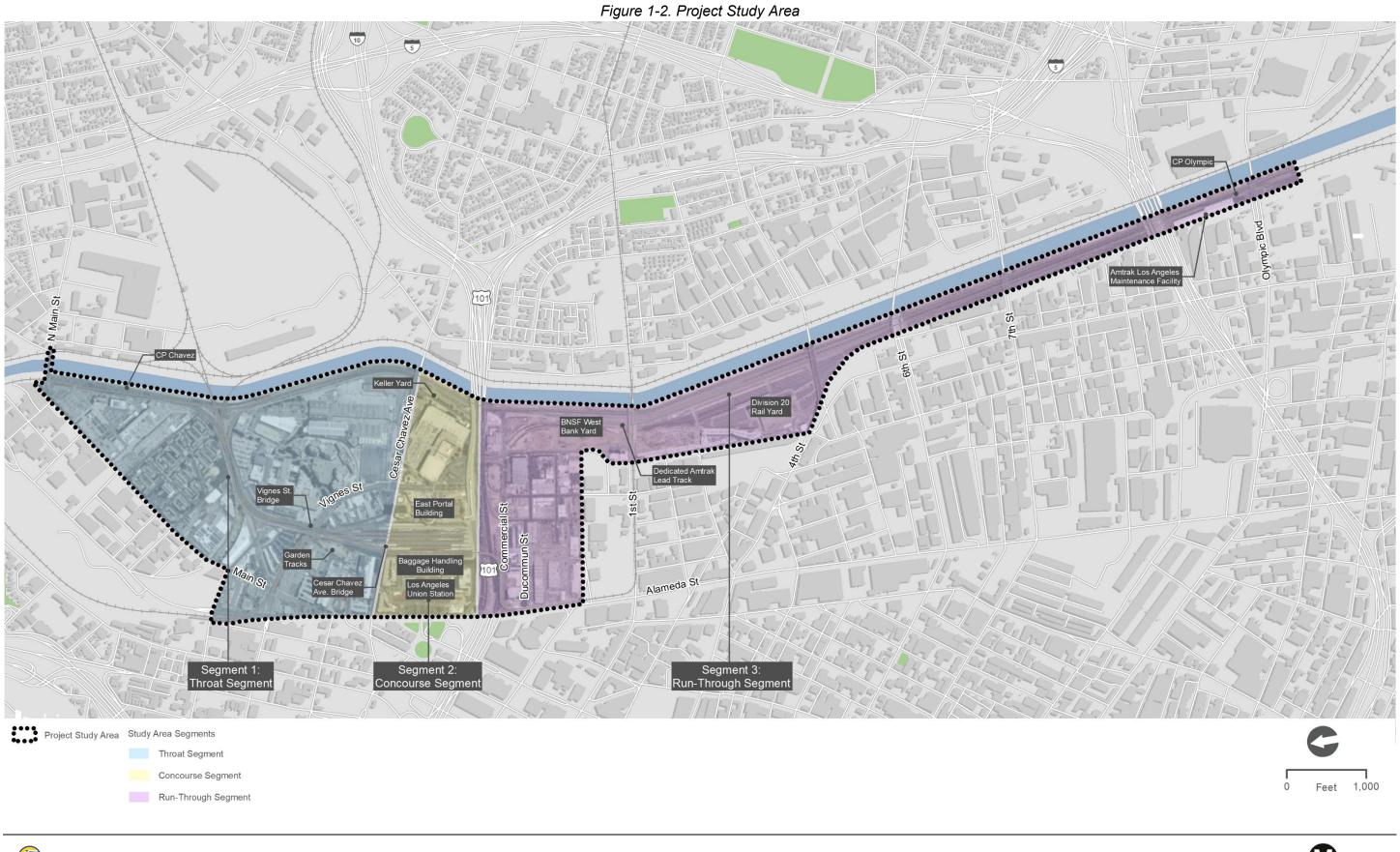




















1.4 **Project Alternatives**

The EIS includes an evaluation of the No Action Alternative and one build alternative (Build Alternative). The Build Alternative would include, but not be limited to, new lead tracks north of LAUS (Segment 1: Throat Segment), an elevated throat and rail yard with concourse-related improvements at LAUS (Segment 2: Concourse Segment), and 10 run-through tracks south of LAUS (Segment 3: Run-Through Segment).

1.4.1 No Action Alternative

NEPA (40 CFR 1502.14(d)) requires federal agencies to include an analysis of "the alternative of no action." For NEPA purposes, the No Action Alternative is the baseline against which the effects of implementing the Build Alternative is evaluated against to determine the extent of environmental and community effects. For the No Action Alternative, the baseline year is 2016, and the horizon year is 2040.

The No Action Alternative represents the future conditions that would occur if the proposed infrastructure improvements and the operational capacity enhancements at LAUS were not implemented. The No Action Alternative reflects the foreseeable effects of growth planned for the area in conjunction with other existing, planned, and reasonably foreseeable projects and infrastructure improvements in the Los Angeles area, as identified in planning documents prepared by Southern California Association of Governments (SCAG), Metro, and/or Metrolink, including the 2023 Federal Transportation Improvement Program (FTIP) (SCAG 2023), *Final 2008 Regional Comprehensive Plan* (SCAG 2008), and the 2020 RTP/Sustainable Communities Strategy (SCS): Connect SoCal (SCAG 2020).

Conditions in the Project study area would remain similar to the existing condition, as described below:

- Segment 1: Throat Segment Trains would continue to operate on five lead tracks that do not currently accommodate the planned HSR system. The tracks north of LAUS would remain at the current elevation, and the Vignes Street Bridge and Cesar Chavez Avenue Bridge would remain in place.
- Segment 2: Concourse Segment LAUS would not be transformed from a stub-end tracks station into a run-through tracks station, and the 28-foot-wide pedestrian passageway would be retained in its current configuration. No modifications to the existing passenger circulation routes or addition of vertical circulation elements (VCE; escalators and elevators) at LAUS would occur.
- Segment 3: Run-Through Segment Commercial Street would remain in its existing configuration, and implementation of active transportation improvements would likely be implemented along Center Street in concert with the *Connect US Action Plan* (Metro 2015). No modifications to the BNSF West Bank Yard would occur.





1.4.2 Build Alternative

The key components associated with the Build Alternative are summarized north to south below:

- Segment 1: Throat Segment (lead tracks and throat track reconstruction) The Build Alternative includes subgrade and structural improvements in Segment 1 of the Project study area (throat segment) to increase the elevation of the tracks leading to the rail yard. The Build Alternative includes the addition of one new lead track in the throat segment for a total of six lead tracks to facilitate enhanced operations for regional/intercity rail trains (Metrolink/Amtrak) and future operations for HSR trains within a shared track alignment. Regional/intercity and HSR trains would share the two western lead tracks in the throat segment. The existing railroad bridges in the throat segment at Vignes Street and Cesar Chavez Avenue would also be reconstructed. North of CP Chavez on the west bank of the Los Angeles River, the Build Alternative also includes safety improvements at the Main Street public at-grade railroad crossing (medians, restriping, signals, and pedestrian and vehicular gate systems) to facilitate future implementation of a quiet zone by the City of Los Angeles.
- Segment 2: Concourse Segment (elevated rail yard and expanded passageway) -The Build Alternative includes an elevated rail yard and expansion of the existing 28-foot-wide pedestrian passageway in Segment 2 of the Project study area (concourse segment). The rail yard would be elevated approximately 15 feet. New passenger platforms would be constructed on the elevated rail yard with associated VCEs (stairs, escalators, and elevators) to enhance safety elements and improve Americans with Disabilities Act (ADA) accessibility. Platform 1, serving the Gold Line, would be lengthened, and elevated to optimize east to west passenger circulation. The pedestrian passageway would be expanded at the current grade to a 140-foot width to accommodate a substantial increase in passenger capacity with new functionally modern passenger amenities while providing points of safety to meet applicable California Building Code (CBC) and National Fire Protection Association (NFPA) 130 Standards for Fixed Guideway Transit Systems. The expanded passageway and associated concourse improvements would facilitate enhanced passenger circulation and provide space for ancillary support functions (back-of-house uses, baggage handling, etc.), transit-serving retail, and office/commercial uses while creating an opportunity for an outdoor, community-oriented space with new plazas east and west of the elevated rail yard (East and West Plazas). Amtrak ticketing and baggage check-in services would be enhanced, and new baggage carousels would be constructed in a centralized location under the rail yard. A canopy would be constructed over the West Plaza up to 70 feet in height, and two design options are considered for canopies that would extend over the rail yard (Section 1.4.3).
- Segment 3: Run-Through Segment (10 run-through tracks) The Build Alternative includes 10 new run-through tracks south of LAUS in Segment 3 of the Project study area (run-through segment). The Build Alternative includes common rail infrastructure from LAUS to the west bank of the Los Angeles River (vicinity of First Street





Bridge) to support run-through tracks for both regional/intercity rail trains and future HSR trains. At the BNSF West Bank Yard, dedicated lead tracks for Amtrak trains and BNSF trains, in combination with implementation of common rail infrastructure would result in permanent loss of freight rail storage track capacity at the north end of BNSF West Bank Yard (5,500 track feet).

The Build Alternative would also require modifications to US-101 and local streets (including potential street closures and geometric modifications); improvements to railroad signal, positive train control (PTC), and communication systems; modifications to the Gold Line light rail platform and tracks; modifications to the main line tracks on the west bank of the Los Angeles River; modifications to the Amtrak lead track; addition of access roadways to the railroad right-of-way (ROW); land acquisitions; addition of utilities; utility relocations, replacements, and abandonments; and addition of drainage facilities/water quality improvements.

1.4.3 Rail Yard Canopy Design Options

Two design options for canopies over the elevated platforms in the rail yard are considered in conjunction with the concourse-related improvements as part of the Build Alternative.

- Rail Yard Canopy Design Option 1 (individual canopies) This design option would include replacing the existing historic butterfly canopies with individual canopies above each platform. New individual canopies would extend up to 25 feet above each platform and would be similar in form to the existing butterfly canopies but sized to fit the widened and lengthened platforms. Platform lengths would vary between 450 and 1,445 feet. Platforms would be up to 30 feet wide.
- Rail Yard Canopy Design Option 2 (grand canopy) This design option would include replacing the existing historic butterfly canopies with a large grand canopy that would extend up to 75 feet above the elevated rail yard platforms. The grand canopy would be up to 1,500 feet long and wide enough to provide cover over all elevated platforms in the rail yard.

1.5 **Project Implementation Approach**

The implementation of infrastructure improvements would generally occur in three main phases that are evaluated as scenario years in the EIS: the interim condition, the full build-out condition and the full build-out with HSR condition. The infrastructure improvements for each of these scenarios are described below.

1.5.1 Interim Condition

The interim condition is when the run-through track infrastructure south of LAUS and the associated signal modifications, property acquisitions, and civil/structural improvements to facilitate new run-through service would be implemented. The interim condition does not include new lead tracks north of LAUS, or the elevated rail yard and new concourse-related improvements at LAUS. The interim condition aligns with a construction completion date as early as 2026.





A summary of the proposed activities associated with the interim condition is provided below.

- Acquire properties south of LAUS within the Project footprint.
- Relocate utilities north and south of LAUS.
- Acquire a portion of the BNSF West Bank Yard (majority north of First Street) and remove 5,500 feet of existing storage tracks at BNSF West Bank Yard.
- Construct special track work and modify signal/communication infrastructure north of LAUS.
- Construct a run-through track ramp on the southern extent of Platform 4 at LAUS.
- Construct a common viaduct/deck over US-101.
- Construct a common embankment from Vignes Street to Center Street south of LAUS.
- Construct common Center Street Bridge south of LAUS.
- Construct common embankment or new common bridge from Center Street to Amtrak Bridge south of LAUS.
- Construct common Amtrak Bridge south of LAUS.
- Construct Division 20 access road.
- Construct common rail embankment on the west bank of the Los Angeles River (from Amtrak Bridge to First Street Bridge).
- Construct new dedicated lead tracks for BNSF freight trains and Amtrak trains.
- Construct two run-through tracks from Platform 4 at LAUS to the main line tracks along the west bank of the Los Angeles River.

Some embankments and/or bridges south of LAUS could be constructed in a phased manner.

1.5.2 Full Build-Out Condition

The full build-out condition is when new lead tracks and the elevated throat north of LAUS, along with the elevated rail yard and concourse-related improvements at LAUS would be implemented. The full build-out condition aligns with a construction completion date as early as 2031.

A summary of the proposed activities associated with the full build-out condition is provided below.

- Construct new compatible lead tracks and reconstruct throat north of LAUS.
- Construct new bridges over Vignes Street and Cesar Chavez Avenue north of LAUS.
- Construct elevated rail yard, concourse-related improvements, and East/West Plazas at LAUS.





• Construct remaining run-through tracks for regional/intercity rail operations on previously constructed structures south of LAUS.

1.5.3 Full Build-Out with High-Speed Rail Condition

The full build-out with HSR condition is when HSR tracks and catenaries would be implemented through the Project limits to facilitate operation of the planned HSR system. CHSRA is responsible for construction and operation of the planned HSR system, and the EIS identifies where future HSR tracks, catenaries, and related operational infrastructure would be located throughout the Link US Project limits. Operation of HSR trains would occur on two of the lead tracks north of LAUS, Platforms 2 and 3 and associated Tracks 3 through 6 at LAUS, and common rail bridges and embankments south of LAUS. The full build-out with HSR condition corresponds to an HSR opening year consistent with CHSRA's 2022 Business Plan (as early as 2033).







2.0 Objective

This noise and vibration study was prepared to identify potential noise and vibration impacts (synonymous with effects) in accordance with NEPA. The report provides a discussion of alternatives considered, the physical setting of the Project study area, and the noise and vibration regulatory framework applicable to the Project. The assessment identifies the existing noise and vibration conditions and provides an analysis of potential noise and vibration impacts that may occur from short-term construction activities and long-term operation.









3.0 Purpose of Report

The purpose of this report is to:

- 1. Describe the regulatory framework for noise and vibration.
- 2. Describe the methods used for characterizing existing conditions and evaluating construction and operational effects.
- 3. Determine the short-term construction and long-term operational noise and vibration effects.
- 4. Identify mitigation measures that would reduce the potential for adverse effects to occur, to the extent feasible.







4.0 Approach

This chapter describes the overall approach to preparing the noise and vibration analysis for construction and operation. The approach includes:

- Acoustic terminology description.
- Vibration terminology description.
- Methods for assessing operational noise sources.
- Operational vibration.
- Construction noise.
- Construction vibration.

FTA's Transit Noise and Vibration Impact Assessment (FTA 2018), as well as FRA's High-Speed Ground Transportation Noise and Vibration Impact Assessment (FRA 2012) manuals were followed to evaluate the environmental effects of the Project. Additionally, the operational noise assessment implements the methods provided in Section 3.4 of CHSRA's *Environmental Methodology Guidelines* (CHSRA 2014), as applicable. Noise and vibration effects were assessed using procedures followed by the FTA for regional/intercity rail improvements because FRA defers to FTA procedures for this type of evaluation. Because the Project accommodates the planned HSR system, the FRA and the CHSRA procedures are also considered.

4.1 Acoustic Terminology

Noise levels are presented on a logarithmic scale to account for the large pressure response range of the human ear. This logarithmic scale is expressed in units of dB. A dB is defined as the ratio between a measured value and a reference value usually corresponding to the lower threshold of human hearing. The lower threshold of human hearing is defined as 20 micropascals. Typically, a noise analysis examines 11 octave (or $33\frac{1}{3}$ octave) bands ranging from 16 hertz (low) to 16,000 hertz (high). This octave band encompasses the human audible frequency range. Because the human ear does not perceive every frequency with equal loudness, spectrally varying sounds are often adjusted with a weighting filter. The A-weighted filter is applied to compensate for the frequency response of the human auditory system, known as a dBA.

An inherent property of the logarithmic dB scale is that the sound pressure levels of two separate sources are not directly additive. For example, if a sound of 50 dBA is added to another sound of 50 dBA in the proximity, the result is a 3-dB increase, which is a total of 53 dBA and not an arithmetic doubling to 100 dBA.





The human ear perceives changes in sound pressure level relative to changes in "loudness." Scientific research demonstrates the following general relationships between sound level and human perception for two sound levels with the same or very similar frequency characteristics:

- One dBA is the practical limit of accuracy for sound measurement systems and corresponds to an approximate 10 percent variation in the sound pressure level. A 1 dBA increase or decrease is a non-perceptible change in sound to the average person.
- Three dBA increase or decrease is a doubling (or halving) of acoustic pressure level, and it corresponds to the threshold of change in loudness perceptible in a laboratory environment. In practice, the average person is barely able to distinguish a 3 dBA difference in environmental sound outdoors.
- Five dBA increase or decrease is described as a readily perceptible change in relative loudness and is a discernible change in an outdoor environment.
- Ten dBA increase or decrease is a tenfold increase or decrease in acoustic pressure level but is perceived as a doubling or halving in loudness (e.g., the average person would judge a 10 dBA change in sound level to be twice or half as loud).

Figure 4-1 depicts estimations of common noise sources and outdoor acoustic environments. It provides the comparison of relative loudness for each of these sources.

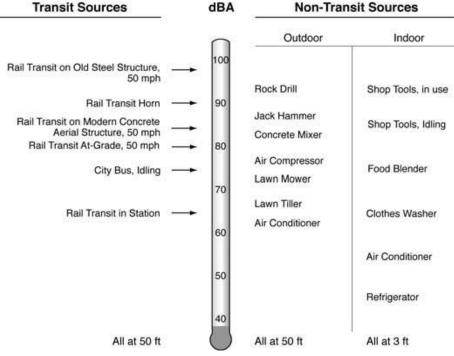


Figure 4-1. Relative Loudness

Source: FTA 2018





Noise levels can be measured, modeled, and presented in various formats. The noise metrics that were employed in this analysis have the following definitions:

- *L_{eq}* (equivalent noise level). Conventionally expressed in dBA, the L_{eq} is the energy-averaged, A-weighted sound level over a specified time period. It is defined as the steady, continuous sound level over a specified time, which has the same acoustic energy as the actual varying sound levels over the specified period. The daytime L_{eq} is the energy averaged sound level for the daytime period (7:00 AM to 10:00 PM) and the nighttime L_{eq} is the energy averaged sound level for the nighttime period (10:00 PM to 7:00 AM).
- *L_{dn}* (day-night sound level). The L_{dn} is the energy average, hourly A-weighted L_{eq} for a 24-hour period with a 10-dB penalty added to sound levels occurring during the nighttime hours (10:00 PM to 7:00 AM) to account for individuals' increased sensitivity to noise levels during nighttime hours.
- *dB*. Noise levels are presented on a logarithmic scale to account for the large pressure response range of the human ear and are expressed in units of decibels (dB). A decibel is defined as the ratio between a measured value and a reference value usually corresponding to the lower threshold of human hearing defined as 20 micropascals (μPa). The A-weighted filter is applied to compensate for the frequency response of the human auditory system, known as dBA.
- *L_{max}*. The maximum A weighted sound level as determined during a specified measurement period. It can also be described as the maximum instantaneous sound pressure level generated by a piece of equipment or during a construction activity.
- **Community noise equivalent level.** Community noise equivalent level (CNEL) is another average A weighted L_{eq} sound level measured over a 24-hour period; however, this noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained after adding 5 dB to sound levels occurring during evening hours (7:00 PM to 10:00 PM) and 10 dB to noise levels occurring during nighttime hours (10:00 PM to 7:00 AM).

4.2 Vibration Terminology

As noted in the FTA's *Noise and Vibration Impact Assessment* (FTA 2018), both train operations and construction activities can be a source of groundborne vibration. As discussed above, FRA has adopted FTA's procedures and guidance for this vibration impact assessment. During the construction phase, activities such as driving piles and operating heavy equipment may cause groundborne vibration. Due to the weight of train equipment, the operation of trains can also cause groundborne vibration. Vibration is an oscillatory motion, which can be described in terms of displacement, velocity, or acceleration. Velocity or acceleration is typically used to describe vibration.





The following two descriptors are frequently used when discussing quantification of vibration:

- **Peak Particle Velocity (PPV)**: The maximum instantaneous positive or negative peak of the vibration signal.
- **Root Mean Square:** The square root of the average of the squared amplitude of the vibration signal, which is typically calculated over a 1-second period.

4.3 Methods for Assessing Operational Noise Sources

4.3.1 Rail Noise

The steps described in FTA's Transit Noise and Vibration Impact Assessment Manual (FTA 2018), as well as the FRA's High-Speed Ground Transportation Noise and Vibration Impact Assessment Manual (FRA 2012) were followed to evaluate the potential noise and vibration impacts of the Project. Additionally, the operational noise assessment implements the methods provided in the CHSRA's Environmental Methodology Guidelines (CHSRA 2014). FTA and FRA methodology identifies a noise screening procedure, a general noise assessment, and a detailed noise analysis, which are outlined below.

- Noise Screening Procedure. Following the FTA and FRA noise screening procedure, the project type was identified (e.g., commuter rail main line, commuter rail station, HSR main line, and HSR station). Project-to-receiver screening distances are provided in the manuals for each of these project types. Adjustments to the generic screening distances are made to suit a particular project using the methodology in Section 4.3, Step 3 of the FTA manual and Chapter 4.1 of the FRA manual (FTA 2018; FRA 2012). For the Project, the largest (i.e., longest) project-to-receiver screening distance identified is associated with the commuter rail centerline main line activity. FTA indicated that the potential for noise impacts beyond 750 feet, or 375 feet for areas that are located behind intervening buildings, is minimal for commuter rail main line activity (FTA 2018). Receivers outside of this distance do not require further noise analysis. Receivers within the screening distance are carried forward for the general noise assessment.
- **General Noise Assessment.** Following this methodology, the existing noise level and the project noise level are estimated and compared with the impact criteria contained in the manual. The estimations include parameters such as project type and location of proposed infrastructure, representative noise-source levels, design speed, and time and frequency of operation. Because severe noise impacts were identified as part of the general noise assessment for rail noise, the noise analysis then proceeded to the more detailed noise analysis.
- **Detailed Noise Analysis.** Following FTA's and FRA's detailed noise assessment methodology, the noise impacts associated with the Project were quantified through an in-depth analysis. The methodologies outlined in Section 4.5 of the FTA manual and Chapter 5 of the FRA manual (FTA 2018; FRA 2012) were used to calculate the L_{dn} noise levels attributable to train operations on the rail alignment under the existing,





future-no-project, and future-with-project scenarios (project-related contribution). Receivers of interest (i.e., potential noise-sensitive receptors) were selected using the guidance provided in Section 4.5 of the FTA manual, which is very similar to the guidance in the FRA manual for the planned HSR system (FTA 2018; FRA 2012).

The Project requires a Detailed Noise Assessment. The noise modeling effort associated with the detailed noise assessment accounted for the number of train movements anticipated to pass through LAUS during daytime and nighttime hours throughout operation. The following assumptions were made as part of the detailed noise assessment.

- The typical train speed along the alignment(s) through the Project study area north of the station and for trains running before connecting to the main line tracks would be limited to 20 to 25 miles per hour. For this analysis, 25 miles per hour was used.
- Train speeds at LAUS would be 15 miles per hour and are assumed to increase up to 30 miles per hour after trains exit LAUS terminal tracks.
- Future train movements and consists (e.g., the number of locomotives and cars per train movement anticipated to pass through LAUS) are based off those provided in the *Link US Rail Planning Technical Memorandum* (Metro 2024b).
- There are two private at-grade rail crossings southwest of the "wye," where trains enter and exit LAUS in the throat segment near William Mead Homes. Operationally, the use of horns for trains entering and exiting the station is restricted because it is considered a quiet zone unless workers are present on the ground or if the locomotive engineer judges a situation to be a safety issue. The two private at-grade rail crossings are at a location that triggers safety issues because they are located along a blind curve. In 2018, Metro conducted a train horn use study (independent of this report) to identify the percentage of trains using a horn at these crossings (Metro 2018). The general approach of this report included one day of train traffic monitoring near the at-grade crossings to identify when a train horn was used. At the time of hearing a train horn, a basic noise measurement of the horn level was conducted using a cell phone. This report identified that 44 percent of trains sound their horns at the two private at-grade rail crossings. Consistent with the data obtained by Metro, for the purposes of this evaluation, noise modeling assumes that 44 percent of trains utilizing tracks that intersect these two private at-grade crossings would continue to use horns as they approach the blind turn in the future.
- At the North Main Street public at-grade rail crossing, the same train horn study referenced above identified that 100 percent of trains sound their horn at this crossing. Therefore, consistent with the data Metro obtained, for the purposes of this report, the noise modeling assumes that 100 percent of trains use horns at the North Main Street crossing. Upon implementation of a Quiet Zone by the City of Los Angeles, the improvements may help to reduce noise at William Mead Homes in the future. It is currently unknown when a quiet zone at this location would be approved by the California Public Utilities Commission and FRA; therefore, reduced noise levels resulting from implementation of a quiet zone at this location.





- The future noise exposure would be the combination of the existing noise exposure and the additional noise exposure caused by the Build Alternative. Train movement volumes are projected to increase in the future as identified in the *Link US Rail Planning Technical Memorandum* (Metro 2024b) provided as Appendix C to the EIS/SEIR, and these increases are defined as Project-related operational noise sources where there are existing tracks in operation. These train movements are incorporated into the noise modeling conducted for 2026, 2031, and 2040. The 2026 and 2031 years correspond to the two major phases of Project implementation (interim condition and full build-out condition), and the 2040 condition corresponds to the horizon years and timeframe for corresponding service goals and objectives of multiple statewide plans and mandates. A summary of the Project-related capacity enhancements associated with each scenario is provided below:
 - o 2026: Two new regional/intercity rail run-through tracks from Platform 4 at LAUS (interim condition).
 - 2031: All regional/intercity rail improvements at LAUS including the new lead tracks and reconstructed throat, elevated rail yard and concourse-related improvements, and 10 run-through tracks (full build-out condition).
 - o 2040: Full operation of HSR service at LAUS.
- Where there are no tracks currently in operation, such as areas just south of LAUS, the train movements for 2026, 2031, and 2040 are treated as a new noise source.
- In 2026, as part of the Build Alternative, the following assumptions were incorporated into the noise modeling:
 - o Some Metrolink trains that provide service to/from south of LAUS would use the new run-through tracks to access the station.
 - o Amtrak Pacific Surfliner trains operating to and from the south would use the run-through tracks as well (subject to schedule coordination with Metrolink trains using the same tracks). This would reduce the total number of trains operating in the throat area.
 - o Amtrak long distance trains would continue to access LAUS from the north as they currently do.
- In 2031, as part of the Build Alternative, the following assumptions were incorporated into the noise modeling:
 - o Amtrak Pacific Surfliner trains departing to or arriving from locations south of LAUS would use the run-through-tracks.
 - Because access to the Amtrak Los Angeles Maintenance Facility cannot be accomplished via the new run-through tracks, it is assumed that all Amtrak longdistance trains and 60 of the daily Amtrak Pacific Surfliner trains (approximately two thirds of all trains) would access the Amtrak Los Angeles Maintenance Facility as they





currently do from the north through the throat segment and then follow tracks south along the west side of the Los Angeles River.

- In 2040, as part of the Build Alternative, the following assumptions were incorporated into the noise modeling:
 - o The majority of the Metrolink trains accessing LAUS from the north would need to utilize the tracks on the east bank of the Los Angeles River to accommodate HSR service anticipated to be in operation. From there, the trains would cross using the northernmost bridge to access the throat.
 - o Because access to the Amtrak Los Angeles Maintenance Facility cannot be accomplished via the new run-through tracks, it is assumed that all Amtrak longdistance trains and 60 of the daily Amtrak Pacific Surfliner trains would access the Amtrak Los Angeles Maintenance Facility as they currently do from LAUS north through the throat and then utilize tracks south along the west bank of the Los Angeles River.
 - o North of LAUS, Amtrak Pacific Surfliner trains would continue to use the tracks on the west bank of the Los Angeles River.
 - o Metrolink and Amtrak trains are assumed to be operating using diesel fuel, and for safety purposes, would continue to use horns at private crossings in the throat segment.
- Because actual train schedules have not been prepared by the rail operators for the years
 of analysis (2026, 2031, and 2040), it is not possible at this time to calculate a peak
 daytime noise level for "daytime use only" noise-sensitive land uses, such as parks;
 therefore, the daytime L_{eq} is used to assess "daytime use only" impacts on noise-sensitive
 land uses.
- For construction-related impacts, activities in the concourse segment (Segment 2) and run-through segment (Segment 3) would generally involve use of heavy equipment as detailed in the impact analysis section of this report.

Appendix A of this report provides a summary of the fundamental equations used for this analysis. Appendix A also provides the noise model input assumptions and the output (i.e., calculated noise levels) of the rail noise analysis.

4.3.2 Three-Dimensional Predictive Model

Operational sound levels can be assessed using the FTA/FRA spreadsheet models; however, efficiencies can be gained by implementing "off-the-shelf" acoustic modeling software that implements the calculation methods of the FTA/FRA spreadsheets. Additionally, analyses of complex rail operations are not easily accomplished via the spreadsheet models. Therefore, for this assessment, a three-dimensional off-the-shelf predictive models, SoundPLAN software version 8.2, was used to calculate rail noise levels implementing the FTA/FRA methods for regional/intercity rail, light-rail transit, and HSR trains. These modeling programs conform to the





FTA/FRA standard for rail noise sources. The SoundPLAN model includes an array of data inputs, such as sound sources, topography, buildings, and ground characteristics, such as paved areas and vegetated areas. The following steps were taken to implement the FTA/FRA standard for rail noise sources in SoundPLAN:

- Step A: FTA/FRA spreadsheets were used to identify source terms (i.e., noise levels) for each train set that would operate on a given rail line at 50 feet.
- Step B: Each train configuration (i.e., Metrolink, Amtrak Pacific Surfliner, Amtrak long distance, and HSR) and the number of train movements on a given track location were entered into SoundPLAN. The resultant level was compared against the items developed in Step A to ensure consistency.
- Step C: Each source term was applied to specific rail lines based on estimates of train movements for 2026, 2031, and 2040 as outlined in the *Link US Rail Planning Technical Memorandum* (Metro 2024b), which included a mix of Metrolink regional rail trains, Amtrak Pacific Surfliner and long-distance trains, and HSR trains. The years 2026 and 2031 correspond to the two major phases of Project implementation (interim condition and the full build-out condition). The year 2040 corresponds to the horizon years and corresponding service goals and objectives of multiple statewide plans and mandates.
- Step D: The Build Alternative scenario was modeled utilizing the track alignment and configuration, and estimated train movements for each independent rail operator (Metrolink, Amtrak, and the CHRSA).
- Step E: Idling train noise was calculated via point sources in the SoundPLAN model, and the source terms were generated using FTA's methods (FTA 2018). Attenuation effects of the point sources were calculated implementing the International Organization for Standardization's *International Standard 9613-2 Acoustics Attenuation of Sound during Propagation Outdoors* (International Organization for Standardization 1996).
- Step F: Modeling included terrain contours to capture terrain changes, including those associated with the elevated rail yard.
- Step G: Buildings were modeled as three-dimensional shapes to capture attenuation impacts.
- Step H: Although there are small patches of grass and dirt in the Project study area, the noise predictions conservatively assume a uniformly hard and acoustically reflective surface like that of a paved area.

Operational noise levels were compared with the relevant noise impact criteria identified in Chapter 4.0. Noise levels associated with special trackwork, such as crossovers, were also included in this assessment for sensitive receptors located within 200 feet of the alignment. Although CHSRA's *Environmental Methodology Guidelines* exclude these potential sound and vibration sources (CHSRA 2014), because regional/intercity rail trains are evaluated, these sources are considered in this assessment.





4.3.3 Wheel Squeal Noise

Wheel squeal is the noise produced by wheel-rail interaction, particularly on a curve where the radius of curvature is smaller than allowed by the separation of the axles in a wheel set. Wheel squeal has not been included in the noise projections because wheel squeal is highly variable, which makes accurate projections difficult. However, the FTA and FRA manuals indicate that standard steel wheel on steel rail systems tend to initiate curve squeal at curves with radii less than 100 times the truck wheelbase (FTA 2018; FRA 2012).

For the trains in the Project study area, assuming a truck wheelbase of 9 feet, wheel squeal would initiate on curves with a radius of 900 feet or less. North of LAUS, the planned track curvature for the alignment has a radius of less than 900 feet, which is similar to the existing curves in this area. Measurements in this area were used to identify existing occurrences of wheel squeal at nearby noise-sensitive land uses, such as William Mead Homes and squeal was present only on some of the operations. Measurements indicated that on some tracks and with some train squeals occurs intermittently indicating that friction modifiers in the area may be malfunctioning. This may be due to friction modifiers requiring service or certain vehicles needing wheel maintenance. South of LAUS, the proposed curvature would also have radii of less than 900 feet; however, no noise-sensitive receptors occur within the screening distance.

4.3.4 Traffic Noise

Due to low trip generation associated directly with the Project compared to the high existing traffic noise levels not associated with the Project, traffic noise was considered part of the existing noise exposure and was not modeled as part of the Project.

4.4 **Operational Vibration**

The FTA and FRA procedures for a general operational vibration assessment (as outlined in Section 6.4 of the FTA manual and Chapter 8 of the FRA manual) were used for this analysis (FTA 2018; FRA 2012). The FTA/FRA assessment procedure requires the following data:

- **Number of daily vibration events:** The number of daily events was classified as frequent because there would be over 70 vibration events of the same kind per day.
- Receiver land use designation (categories specified above): Category 2 (for the residences) or Category 3 (parks, schools, daycare) land use designations were used for all of the receivers analyzed.
- **Vibration source levels:** The source levels were derived from Figure 6-4 and Table 6-10 of the FTA manual (FTA 2018) using the curve for "locomotive-powered passenger or freight" and Table 8-1 of the FRA manual (FRA 2012).
- **Distance from source to receiver (building) footprints:** The distance between the source (i.e., rail centerline) and the receiver was measured using a geographic information system.





- Train speed, suspension, wheel condition (worn or flat-spots), and track condition: Train speed estimates would range from 20 to 25 miles per hour. Because the train types are regional/intercity rail and HSR, the train's wheels were assumed to be well-maintained and in good condition (i.e., no flat spots).
- **Number of floors above grade to the receiver:** The upper floors of William Mead Homes, Mozaic Apartments, and Care First Village were considered relative to the source of potential noise and vibration that may result from the Build Alternative.
- Soil characteristics of ground between the vibration source and receiver: Soil propagation characteristics were assumed to be normal (rather than efficient as assumed in FTA Figure 6-4 and Table 6-10) based on the State Soil Geographic database for California (U.S. Department of Agriculture 2011). FTA guidelines indicate that efficient ground, such as stiff clay soils, can result in propagation of vibration to greater distances. Typical vibration-sensitive structures were assumed to be large masonry buildings based on field observations.
- Receiver construction/foundation type and description, including whether it is fragile or extremely fragile: Using the generalized ground surface vibration curve, the root mean square velocity level data at the receiver distance of interest were adjusted based on the factors affecting the source, factors affecting the vibration path, and factors affecting the receiver (FTA 2018). Structure types and associated adjustments were also obtained from the FTA manual (FTA 2018).

The potential for damage to adjacent architectural resources as a result of Project-related operational vibration was analyzed in addition to the modeled noise- and vibration-sensitive receivers. Following FTA methodology, the potential for vibration damage and annoyance was assessed at sensitive land uses.

4.5 Construction Noise

Noise from construction activity is generated by the broad array of powered, noise-producing mechanical equipment used in the construction process. This equipment ranges from hand-held pneumatic tools to excavators, loaders, a variety of trucks, and tie and rail handling equipment. To assess potential noise impacts from construction, this noise analysis used the methodology in Section 7 of the FTA manual and Chapter 10 of the FRA manual, which are identical to one another (FTA 2018; FRA 2012).

The noise exposure at a receiver location was calculated from the dB addition of all operating construction equipment using the equations and methodology described in the FTA/FRA manuals (FTA 2018; FRA 2012). For example, the attenuation rate used as a point source was 6 dB per doubling of distance. The intervening ground was generally hard surfaced; therefore, any additional reduction from ground effects was negligible. Where applicable, shielding effects from intervening structures were accounted for using the same shielding calculations used in the rail noise analysis (FTA 2018; FRA 2012).





Table 7-1 of the FTA manual presents the construction source noise emission levels at a reference distance of 50 feet (FTA 2018). The noise emission levels for construction equipment planned to be on site is indicated in Table 4-1 of this report. Construction equipment used in the analysis included trucks, loaders, rollers, mobile cranes, ballast tampers, generators, and other items. The range in noise levels typically generated by the equipment assumed for the analysis ranges from 74 dBA L_{eq} (e.g., water trucks or flatbed trucks) to 101 dBA L_{eq} (e.g., impact pile drivers) at a distance of 50 feet (FHWA 2018). The noise modeling effort associated with the detailed noise assessment used a conservative construction scenario assuming all major Project components would be constructed together (lead tracks, elevated throat and rail yard, concourse, and run-through tracks) over a 6-year duration, while accounting for the construction fleet and location of proposed construction activities.

4.6 Construction Vibration

To assess potential vibration effects from construction, this vibration analysis used the methodology contained in Section 7.2 of the FTA manual and Chapter 10.2 of the FRA manual, which are identical (FTA 2018; FRA 2012). The potential for damage to structures from Project-related construction vibration was analyzed for the sensitive receivers discussed above. Vibration source levels for a variety of typical construction equipment types are outlined in Table 7-4 of the FTA manual (reproduced in this report as Table 4-1), in terms of PPV in inches per second at a reference distance of 25 feet from the source and vibration velocity level in decibels (VdB) at 25 feet (FTA 2018; FRA 2012). For this analysis, the source of typical vibration levels for an impact pile driver (0.644 inch per second PPV) and vibratory roller (0.210 inch per second PPV) were utilized.

Table 4-1. Typical Construction Equipment Vibration Levels						
Equipment/Source		PPV at 25 Feet (inch/second)	Approximate Vibration Velocity Level at 25 Feet ^a			
Pile driver (impact)	Upper range	1.518	112			
	Typical	0.644	104			
Pile driver (vibratory)	Upper range	0.734	105			
	Typical	0.170	93			
Clam shovel drop (slurry wall)	_	0.202	94			
Hydromill (slurry wall)	In soil	0.008	66			
	In rock	0.017	75			





Table 4-1. Typical Construction Equipment Vibration Levels						
Equipment/Source		PPV at 25 Feet (inch/second)	Approximate Vibration Velocity Level at 25 Feet ^a			
Vibratory roller	—	0.210	94			
Hoe ram	—	0.089	87			
Large bulldozer	—	0.089	87			
Caisson drilling	—	0.089	87			
Loaded trucks	—	0.076	86			
Jackhammer	—	0.035	79			
Small bulldozer	—	0.003	58			

Source: FTA 2018

Notes:

^a Root mean square VdB reference 1 microinch per second.

PPV=peak particle velocity; VdB=vibration velocity level in decibels.

4.6.1 Approach to Project Noise and Vibration Analysis

The most prominent areas where operational noise and vibration levels would occur is north of and at LAUS, near William Mead Homes, the Care First Village, and Mozaic Apartments as these are all residential land uses. Train movements through LAUS in the 2026, 2031, and 2040 conditions would be substantially greater than existing levels (Metro 2024b).

A detailed construction scenario with estimated durations and types of equipment was developed to estimate noise and vibration levels for the construction activities having the most daily equipment usage (i.e., daily engine hours).





5.0 Noise/Vibration Criteria

5.1 Noise Impact Criteria

5.1.1 Federal Regulations and Guidelines

Several federal laws and guidelines are relevant to the assessment of ground transportation noise and vibration impacts and are applicable to the Project:

- The Noise Control Act of 1972 (42 U.S. Code Section 4910) was the first comprehensive statement of national noise policy. It declared that "it is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare."
- The FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018) provides the methodology and impact criteria applicable to conventional passenger rail and transit components associated with the Project.
- The FRA *High-Speed Ground Transportation Noise and Vibration Impact Assessment* (FRA 2012) provides the methodology and impact criteria applicable to the planned HSR system.

FTA published a revised noise and vibration impact assessment manual in 2018. The FRA impact assessment guidance is primarily to address noise and vibration from projects with train speeds of 90 to 250 miles per hour while providing reference to the FTA manual for projects with conventional train speeds below 90 miles per hour. The impact criteria in both guidance documents are based on the goal of maintaining a noise environment considered acceptable for land uses, where noise and vibration may have an impact. The noise exposure is quantified in terms of the L_{dn} for residential land uses or in terms of the hourly equivalent sound level for other land uses.

The FTA states that in cases where changes are proposed to an existing transit system, its cumulative noise criteria can be used (FTA 2018). In the case of the Project, the cumulative noise criteria are appropriate in most areas because the existing facility is being modified, with an exception being the area immediately south of the station where the new run-through tracks would be constructed.

In FTA's Transit Noise and Vibration Impact Assessment Manual (FTA 2018) and FRA's High-Speed Ground Transportation Noise and Vibration Impact Assessment Manual (FRA 2012), noise impact criteria for operation of rail facilities are based on the change in outdoor noise exposure using a sliding scale with three land use categories and three degrees of impact. The criteria were established to reflect a heightened community annoyance caused by late-night, or early morning service, as well as communities' varying sensitivity to noise from projects during different ambient noise conditions.





For operational rail noise, FTA's and FRA's three land use categories are as follows:

- **Noise Category 1:** Tracts of land where quiet is an essential element in their intended purpose, such as outdoor amphitheaters, concert pavilions, and National Historic Landmarks with significant outdoor use.
- **Noise Category 2:** Residences and buildings where people normally sleep, including homes, hospitals, and hotels.
- **Noise Category 3:** Institutional land uses (i.e., schools, places of worship, libraries) with use typically during the daytime and evening. Other uses in this category can include medical offices, conference rooms, recording studios, concert halls, cemeteries, monuments, museums, historical sites, parks, and recreational facilities.

The three categories are determined from general land use information about each receiver. No Category 1 receivers are located within 1 mile of the proposed track alignment, which is well beyond the typical FTA screening distance for noise or vibration impacts. Outdoor hourly L_{dn} applies to Category 2, whereas outdoor hourly L_{eq} applies to Category 3.

Noise impacts on Category 2 and Category 3 land uses as a result of a project are assessed by comparing existing and future Project-related outdoor noise levels. Figure 5-1, Figure 5-2, and Figure 5-3 illustrate the FTA noise impact criteria as they relate to each land use category. As shown in Figure 5-1, the criterion for each degree of impact is based on a sliding scale dependent on the existing noise exposure and the increase in noise exposure attributable to the Project. Figure 5-1 shows Project based noise impact criteria, and Figure 5-2 and Figure 5-3 illustrate cumulative noise impact criteria. Based on FTA/FRA criteria, potential noise impacts fall into three types: no impact, moderate impact, and severe impact (FTA 2018; FRA 2012). The impact categories are described further below:

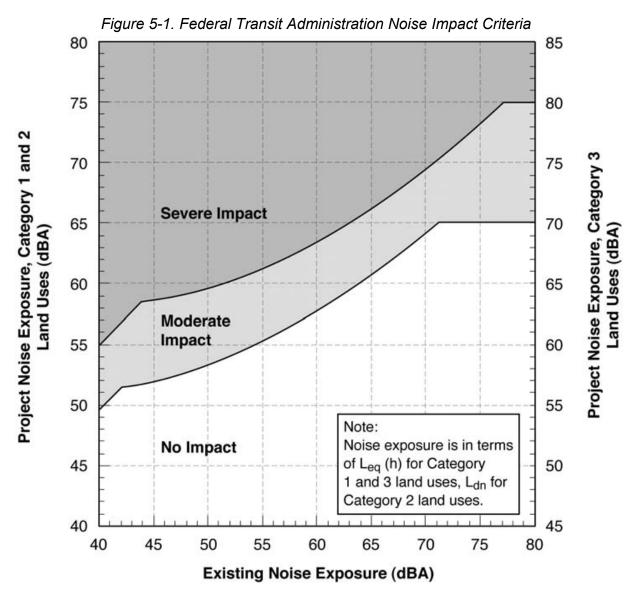
- **No Impact:** A project on average would result in an insignificant increase in the number of instances where people are highly annoyed by new noise. This impact level would not require mitigation.
- **Moderate Impact:** The change in cumulative noise is noticeable to most people, but may not be sufficient to cause strong, adverse community reactions. The FRA and FTA manuals indicate mitigation for this impact level should be considered but is not required.
- **Severe Impact:** A high level of people would be highly annoyed by the noise, perhaps resulting in vigorous community reaction. The FRA and FTA manuals indicate mitigation for this impact level is required.

An example of an impact evaluation is FTA's sliding impact criterion for Category 2 receivers. An existing environment of 50 dBA L_{dn} would experience a moderate impact if the Project creates a noise exposure of approximately 53 dBA to 59 dBA L_{dn} , or if there is an increase of 5 to 10 dB. An existing environment of 65 dBA L_{dn} would be classified as having no impact if the Project creates a noise exposure of 61 dBA to 66 dBA L_{dn} , or if there is an increase of up to 2 dB. Those same existing environments (50 or 65 dBA L_{dn}) would be classified as having a severe impact if





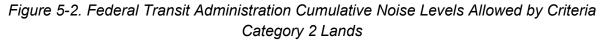
the Project creates noise exposure levels greater than 59 dBA and 66 dBA L_{dn} , respectively, or an increase of over 15 dB and 4 dB, respectively. Chapter 7.0 of the FTA manual contains tables listing suggested construction noise impact criteria depending upon the level of detail/understanding of the construction phase (FTA 2018). For the more detailed approach applicable to the Project, the FTA's guidelines for assessment of construction noise shown in Table 5-2 are suggested for use due to different noise levels for daytime and nighttime construction. Daytime is defined as 7:00 AM to 10:00 PM, and nighttime is defined as 10:00 PM to 7:00 AM.

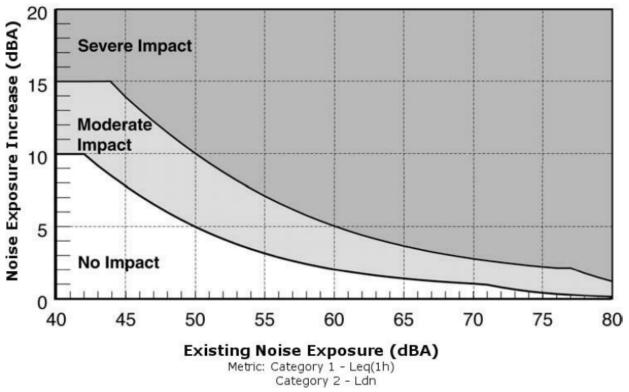


Source: FTA 2018





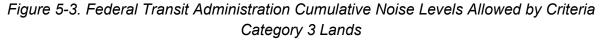


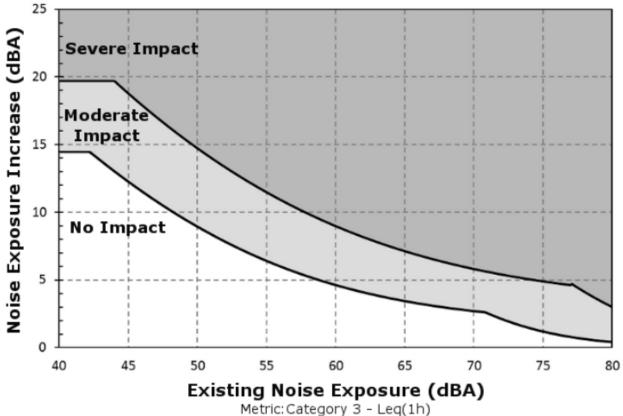


Source: FTA 2018









Source: FTA 2018

Table 5-1. Noise Levels Defining Impact for Federal Transit Administration/FederalRailroad Administration Projects

Existing		Project Noise Impact Exposure (dBA)					
Noise Exposure (dBA)	Category 1	l (L _{eq} (1 hour) Sites) or 2 (L _{dn}))	Categor	ry 3 Sites (L _{eq}	(1hour))	
L _{eq} (1 hour) or L _{dn}	No Impact	Moderate Severe No Impact Impact Impact		No Impact	Moderate Impact	Severe Impact	
<43	<ambient+10< td=""><td>Ambient + 10 to 15</td><td>>Ambient+15</td><td><ambient+15< td=""><td>Ambient + 15 to 20</td><td>>Ambient+20</td></ambient+15<></td></ambient+10<>	Ambient + 10 to 15	>Ambient+15	<ambient+15< td=""><td>Ambient + 15 to 20</td><td>>Ambient+20</td></ambient+15<>	Ambient + 15 to 20	>Ambient+20	
43	<52	52–58	>58	<57	57–63	>63	
44	<52	52–58	>58	<57	57–63	>63	





Table 5-1. Noise Levels Defining Impact for Federal Transit Administration/Federal Railroad Administration Projects

Existing	Project Noise Impact Exposure (dBA)						
Noise Exposure (dBA)	Category 1	Category 1 (L _{eq} (1 hour)) or 2 (L _{dn})) Sites Ca			ry 3 Sites (L _{eq}	(1hour))	
L _{eq} (1 hour) or L _{dn}	Moderate Severe No Impact Impact Impact		No Impact	Moderate Impact	Severe Impact		
45	<52	52–58	>58	<57	57–63	>63	
46	<53	53–59	>59	<58	58–64	>64	
47	<53	53–59	>59	<58	58–64	>64	
48	<53	53–59	>59	<58	58–64	>64	
49	<54	54–59	>59	<59	59–64	>64	
50	<54	54–59	>59	<59	59–64	>64	
51	<54	54–60	>60	<59	59–65	>65	
52	<55	55–60	>60	<60	60–65	>65	
53	<55	55–60	>60	<60	60–65	>65	
54	<55	55–61	>61	<60	60–66	>66	
55	<56	56–61	>61	<61	61–66	>66	
56	<56	56–62	>62	<61	61–67	>67	
57	<57	57–62	>62	<62	62–67	>67	
58	<57	57–62	>62	<62	62–67	>67	
59	<58	58–63	>63	<63	63–68	>68	
60	<58	58–63	>63	<63	63–68	>68	
61	<59	59–64	>64	<64	64–69	>69	
62	<59	59–64	>64	<64	64–69	>69	
63	<60	60–65	>65	<65	65–70	>70	
64	<61	61–65	>65	<66	66–70	>70	
65	<61	61–66	>66	<66	66–71	>71	





Table 5-1. Noise Levels Defining Impact for Federal Transit Administration/Federal
Railroad Administration Projects

Existing	Project Noise Impact Exposure (dBA)						
Noise Exposure (dBA)	Category 1 (L _{eq} (1 hour)) or 2 (L _{dn})) Sites Category 3 Sites (L _{eq} (1ho			(1hour))			
L _{eq} (1 hour) or L _{dn}			Severe Impact	No Impact	Moderate Impact	Severe Impact	
66	<62	62–67	>67	<67	67–72	>72	
67	<63	63–67	>67	<68	68–72	>72	
68	<63	63–68	>68	<68	68–73	>73	
69	<64	64–69	>69	<69	69–74	>74	
70	<65	65–69	>69	<70	70–74	>74	
71	<66	66–70	>70	<71	71–75	>75	
72	<66	66–71	>71	<71	71–76	>76	
73	<66	66–71	>71	<71	71–76	>76	
74	<66	66–72	>72	<71	71–77	>77	
75	<66	66–73	>73	<71	71–78	>78	
76	<66	66–74	>74	<71	71–79	>79	
77	<66	66–74	>74	<71	71–79	>79	
>77	<66	66–75	>75	<71	71–80	>80	

Notes:

dBA=A-weighted decibels; L_{eq}=equivalent noise level; L_{dn}=day–night sound level





Table 5-2. Federal Transit Administration Detailed Construction Noise Criteria					
	8-Hour L _{eq} (dBA)				
Land Use	Day	Night	30-Day Average L _{dn} (dBA)		
Residential	80	70	75 ^a		
Commercial	85	85	80 ^b		
Industrial	90	90	85 ^b		

Source: FTA 2018, FRA 2012

Notes:

^a In urban areas with very high ambient noise levels (L_{dn} greater than 65 dB), L_{dn} from construction operations should not exceed existing ambient + 10 dB.

^b 24-hour L_{eq}, not L_{dn}

dBA=A-weighted decibels; L_{eq}=equivalent noise level; L_{dn}=day-night sound level

City of Los Angeles Municipal Code Section 112.05 indicates that sound levels from construction may not exceed 75 dBA unless it is technically infeasible to keep construction noise within this limit.

5.1.2 Local Regulations

The Project is located in the City of Los Angeles. The City of Los Angeles's municipal code noise regulations are generally not applicable to operational noise from the Project; however, construction noise is restricted via Section 41.40 of the municipal code, which stipulates that:

No person shall, between the hours of 9:00 PM and 7:00 AM of the following day, perform any construction or repair work of any kind upon, or any excavating for, any building or structure, where any of the foregoing entails the use of any power driven drill, riveting machine excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and willfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this Code.

Additionally, the city's code limits construction equipment operating within 500 feet of any residential zone to 75 dBA when measured 50 feet from the source. The City of Los Angeles may provide permission to work outside of these hours where it is in the public interest, or where a hardship, injustice, or unreasonable delay would result from its interruption during the hours provided in Section 41.40 of the Municipal Code. Exception to this code would be completed by the construction contractor before construction begins.





5.2 Vibration

5.2.1 Federal Regulations

The evaluation of vibration impact levels, stated as VdB, is based on the land use category and the number of vibration events per day. The impact level also depends on the type of analysis being conducted (i.e., groundborne vibration or groundborne noise).

The FTA manual provides guidelines to assess human response to different levels of groundborne noise and vibration, as shown in Table 5-3. There are no Category 1 land uses considered within the screening distance (Section 4.3.1). The majority of vibration-sensitive land uses in the Project study area are Category 2 land uses. The term "frequent events" is defined as more than 70 vibration events per day, "occasional events" is defined as 30–70 vibration events per day, and the term "infrequent events" is defined as fewer than 30 vibration events per day.

For areas along heavily used corridors (more than 12 trains per day) where existing vibration levels exceed the thresholds provided in Table 5-3, there is no impact if there is no significant increase in events and Project-related vibration levels result in less than a 3 VdB increase.

Groundborne noise is normally not a consideration when trains are at grade (i.e., not underground or where there are basements or human activity in spaces underground). In these situations, the airborne noise is the major consideration. Groundborne noise generally becomes an important consideration for subways or other projects in which part of the alignment includes a tunnel or where there is otherwise no airborne sound path.

FTA and FRA construction-related vibration guidelines call for investigation of the potential for vibration-induced damage to fragile or extremely fragile buildings (FTA 2018; FRA 2012). Damage to a building is possible (but not necessarily probable) if ground vibration levels exceed the following criteria:

- Exceeds 0.5 inch-per-second PPV (approximately 102 VdB) for reinforced concrete, steel, or timber.
- Exceeds 0.3 inch-per-second PPV (approximately 98 VdB) for engineered concrete and masonry buildings.
- Exceeds 0.20 inch-per-second PPV (approximately 94 VdB) for fragile buildings.
- Exceeds 0.12 inch-per-second PPV (approximately 90 VdB) for extremely fragile buildings.

Table 5-3 presents the groundborne vibration and noise impact criteria. The Project study area does not have any Category 1 land uses (fragile or extremely fragile buildings) within the screening distance. The majority of vibration-sensitive land uses in the Project study area are Category 2 land uses (residential). Construction vibration is assessed based on the potential for damage and the likelihood of annoyance. FTA and FRA indicate engineered concrete and masonry structures (no plaster) have damage criteria of 0.3 PPV (inches per second). To assess





the potential for construction vibration annoyance, the same vibration thresholds as those identified in Table 5-3 for operational vibration are applied.

Table 5-3. Groundborne Vibration and Noise Impact Criteria							
		oundborne Vibr Impact Levels e 1 micro inch/	;	Groundborne Noise Impact Levels (dB re 20 micropascals)			
Land Use Category	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c	
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB⁰	65 VdB°	65 VdB°	d	d	d	
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA	
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA	

Source: FTA 2018 (Table 6-3); FRA 2012

Notes:

a Frequent events is defined as more than 70 vibration events per day.

b Occasional events is defined as between 30 and 70 vibration events of the same source per day.

c Infrequent events is defined as fewer than 30 vibration events per day.

d This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air-conditioning systems and stiffened floors. Vibration-sensitive equipment is not sensitive to groundborne noise.

dB=decibel; dBA=A-weighted decibel; VdB=vibration velocity level in decibels





6.0 Noise- and Vibration-Sensitive Land Uses and Sensitive Receptors

The following discussion provides a description of the noise- and vibration-sensitive land uses where sensitive receptors are located in the Project study area (Category 2 and 3 land uses). The receptor locations are used for predictions and represent a cluster of sensitive receptors, which is consistent with the FTA/FRA guidance and regulations. The noise analysis area includes those noise-sensitive areas within the screening distance (Section 4.3.1), which includes approximately 750 feet from the alignment where no buildings are present and 375 feet for areas where intervening buildings are present. Because vibration attenuates more quickly with distance, the vibration analysis area is substantially smaller; it includes only those vibration-sensitive land uses and structures within 200 feet of the proposed track alignment.

Figure 6-1 identifies the noise- and vibration-sensitive land uses where sensitive receptors (Category 2 and 3 land uses) are located within the 750- and 375-foot screening distances, and community noise and vibration measurement locations for modeled receivers. Based on the applicability of the screening distances, noise- and vibration-sensitive land uses included in the detailed assessment include:

- William Mead Homes;
- Care First Village;
- Metro Senior Housing;
- Mozaic Apartments,
- One Santa Fe Apartments
- Ann Street Elementary;
- La Petite Academy (First 5 LA Headquarters);
- Metro Gateway Childhood Development Center;
- Care First Village playground/park and a park (i.e., athletic fields) at the William Mead Homes;
- Los Angeles County Men's Central Jail and Twin Towers Correctional Facility (although these jails are also located within the analysis area; however, there are no outdoor uses at these jails. For this reason, the jails were evaluated for indoor noise exposure [i.e., sleep disturbance]).

Other Category 2 and 3 land uses that are not included in the detailed assessment are also depicted in Figure 6-1 for informational purposes.





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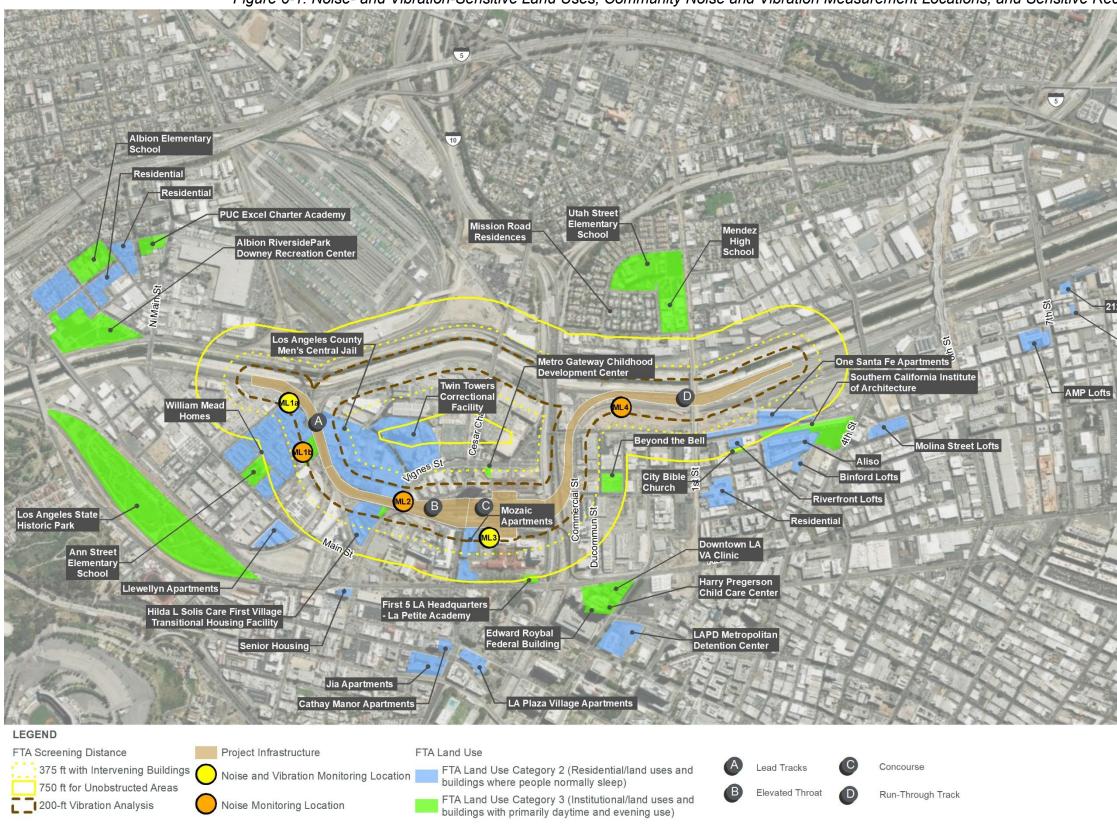


Figure 6-1. Noise- and Vibration-Sensitive Land Uses, Community Noise and Vibration Measurement Locations, and Sensitive Receptor Clusters



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7.0 Existing Conditions

7.1 Noise Conditions

Metro completed a baseline sound survey at representative locations to identify existing noise exposure at noise-sensitive land uses where sensitive receptors occur within screening distances. Table 7-1 provides the noise levels at noise-sensitive land uses in the Project study area for the existing condition. Noise levels are not substantially different than when data were collected primarily because the train equipment and location of noise generators during the day and night are the same. Additionally, the configuration of sensitive receptors remains the same and no new construction of buildings that would obscure noise-sensitive land uses has occurred.

Multiple residences are within the noise analysis study area. The measurement locations depicted on Figure 6-1 are representative of each noise-sensitive receptor to evaluate noise impacts. Measurements at noise-sensitive land uses were taken on weekdays from January 24 through January 26, 2017.

Table 7-1. Measured Noise Levels for the Existing Condition								
		Noise Levels (dBA)						
Site ID	Location	L _{dn}	L _{eq} (day)	L _{eq} (night)				
ML1a	William Mead Homes	69	66	62				
ML1b	Athletic Fields at William Mead Homes	69	66	61				
ML2	Twin Towers Correctional Facility (Terminal Tower) and Care First Village	73	71	66				
ML3	Mozaic Apartments (Amtrak Baggage Handling Building) and Metro Gateway Childhood Development Center	67	64	60				
ML4	One Santa Fe Apartments and Studios (Emergency Security Operations Center)	71	64	64				

Notes:

dBA=A-weighted decibel; ID=identification; $L_{dn}=day$ -night average sound level; $L_{eq}=equivalent$ noise level; ML=monitoring location

In 2021, the Care First Village was constructed. For the purposes of this evaluation, the existing noise levels at Twin Towers Correctional Facility were used to characterize the noise levels for the Care First Village, mainly since the proximity of these two receptors to the measurement location is similar and ML2 is therefore representative of this area as well.

Appendix B provides more details on the measurement effort. The narrative below provides a description of the noise measurements performed.





7.1.1 Monitoring Location 1 – William Mead Homes

William Mead Homes is located in Segment 1 of the Project study area, which is in close proximity to the lead tracks in the throat segment.

Two locations (Figure 7-1 and Figure 7-2) were selected to monitor noise levels: one on a building rooftop located approximately 112 feet from the tracks (ML1a), and one in the facility athletic fields (ML1b). Ground locations near Building 16 of the William Mead Homes would not be suitable due to high likelihood of equipment tampering or theft. At the athletic fields, the location selected was adjacent to the park and within a fenced area that is secured, which was agreed to with the management of William Mead Homes since other locations at the athletic fields were identified as having a high likelihood of equipment tampering or theft. The noise meter at ML1a was set up at 10:30 AM on January 24, 2017, and the noise meter at ML1b was set up at 9:48 AM on the same day. The meters were stored in padlocked cases and secured in place using security chains or sandbags (Figure 7-1 and Figure 7-2). The connected microphones were calibrated before being placed in the direction of the tracks. Several observed sounds could be heard, including the rolling trains, their horns, and their wheels on the track. For security reasons, ML1a was set on the rooftop of a home. Normal residential noises were heard, including music and street traffic. ML1b was located near the athletic fields in close proximity to the maintenance yard where equipment was stored and retrieved, including a lawnmower and motorized carts filled with tools. Figure 7-3 and Figure 7-4 are time history charts of the monitored 1-hour Leg levels.









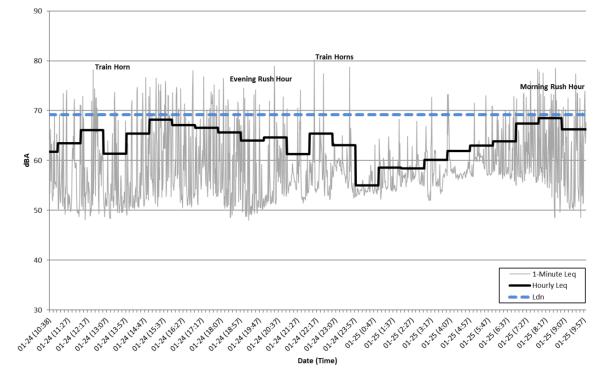








Figure 7-3. Monitoring Location 1a – Hourly Equivalent Noise Level Time History



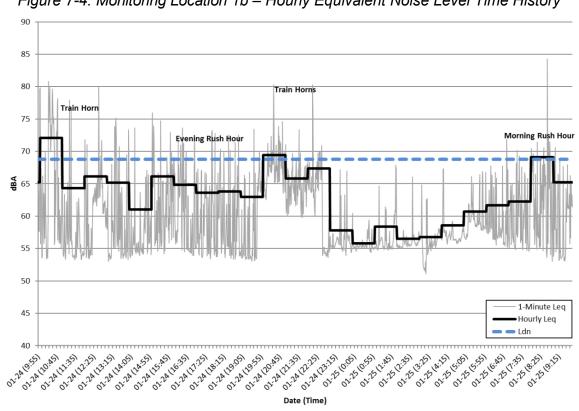


Figure 7-4. Monitoring Location 1b – Hourly Equivalent Noise Level Time History





7.1.2 Monitoring Location 2 – Twin Towers Correctional Facility

A suitable location to characterize the noise levels for this receptor was determined to be the terminal tower, approximately 366 feet from the location of the receptor (Figure 7-5). The terminal tower location was closer in proximity to the railroad tracks by approximately 43 feet. A noise meter was set up at 1:52 PM on January 25, 2017. The meter was calibrated and secured to a nearby fencepost (Figure 7-5). Observed noises at this location included street traffic, idle trains, and active trains. Figure 7-6 is a time-history chart of the measured hourly L_{eq} .



Figure 7-5. Monitoring Location 2 – Noise Meter Location





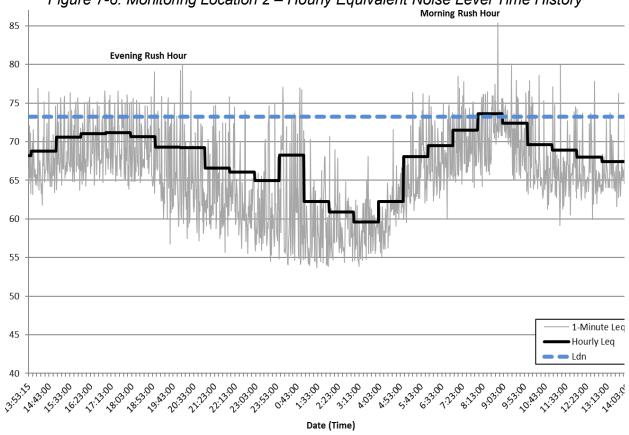


Figure 7-6. Monitoring Location 2 – Hourly Equivalent Noise Level Time History

7.1.3 Monitoring Location 3 – Mozaic Apartments

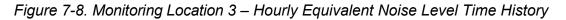
Noise monitoring to capture existing ambient conditions, including sounds from the rail yard, was conducted adjacent to the Mozaic Apartments on the rooftop of the Amtrak Baggage Handling building (Figure 7-7). While not representative of the closest façade of apartment units, ML-3 is more representative of spatial average of the potentially impacted units. For the purposes of this evaluation, the existing noise levels collected at this location were used to characterize the noise levels for Metro Gateway Childhood Development Center, mainly since the proximity of these two receptors to the measurement location is similar and ML3 is therefore representative of this area as well. The noise monitor was set up at 1:37 PM on January 24, 2017, on the northeast corner of the rooftop of the building. Winds were calm during the measurement effort. The sound level meter was field calibrated and secured for 24 hours on a tripod that was kept on the rooftop with sandbags. Observed noises at this location included street traffic, idling trains, moving trains, and the public address system at LAUS. Figure 7-8 is a time-history chart of the measured hourly L_{eq.} Because of equipment limitations at this location, 1-minute L_{eq} intervals could not be collected and are not included in Figure 7-8.

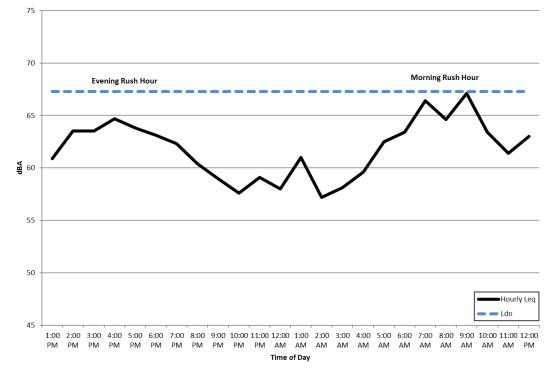






Figure 7-7. Monitoring Location 3 – Noise Meter Location









7.1.4 Monitoring Location 4 – One Santa Fe Apartments and Studios

The Metro Emergency Security Operations Center was determined to be a suitable location for monitoring existing noise levels for One Santa Fe Apartment complex because this location is roughly the same distance from the existing railroad tracks as the One Santa Fe Apartment complex. It is located approximately 1,151 feet north of the apartments (Figure 7-9). The noise meter was calibrated and secured to the fence closest to the tracks using sandbags and security rope (Figure 7-9) at 10:43 AM on January 25, 2017, and lasted 24 hours. The observed noises at this location included street traffic, idle buses, and bus traffic entering and exiting the parking lot. Figure 7-10 is a time-history chart of the ML-4 measurement data.



Figure 7-9. Monitoring Location 4 – Noise Meter Location





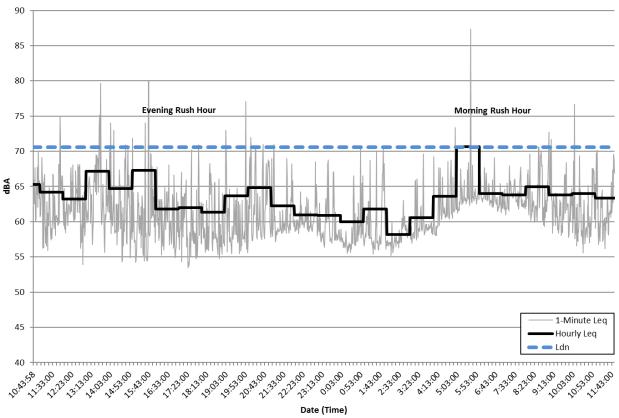


Figure 7-10. Monitoring Location 4 – Hourly Equivalent Noise Level Time History

7.2 Vibration Conditions

Groundborne vibration was measured at vibration-sensitive structures. These measurements were completed at ML1a at William Mead Homes (Figure 7-11) and ML3 at the Mozaic Apartments). Vibration measurements were completed with a seismic grade, low noise accelerometer firmly fixed to the ground. For the purposes of this evaluation, the existing vibration conditions collected at William Mead Homes were used to characterize the vibration conditions for the Care First Village, mainly since the proximity of these two receptors to the measurement location is similar and ML1a is therefore representative of this area as well.

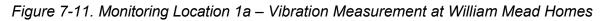
7.2.1 Monitoring Location 1a – William Mead Homes

While the noise meters were collecting data for 24 hours on January 24, 2017, at William Mead Homes, vibration measurements were completed near ML1a for 30 minutes, starting 10:58 AM to obtain a sufficient number of events. The monitoring unit was placed at William Mead Homes on the lawn in front of the nearest structure to the rail corridor (Figure 7-11), approximately 30 feet from the building in the direction of the train tracks. Rail vibration events were measured, which included Metrolink and Amtrak trains. Vibration levels during train events were somewhat variable, with the highest monitored VdB 1-second of all vibration sources listed in Table 7-2. These levels were adjusted to be representative of the nearest William Mead Homes building because the





vibration sensor was located approximately 30 feet from the building in the direction of the train tracks, and the measured vibration levels are considered representative of levels at William Mead Homes Building 16. Measurements focused on the railroad traffic on the tracks located nearby; however, other vibration-inducing events, such as roadway vehicular passby events, were observed. Generally, the highest vibration levels measured resulted from train passby events. Figure 7-12 provides a 1-second time history chart of the monitored VdB with train events identified.









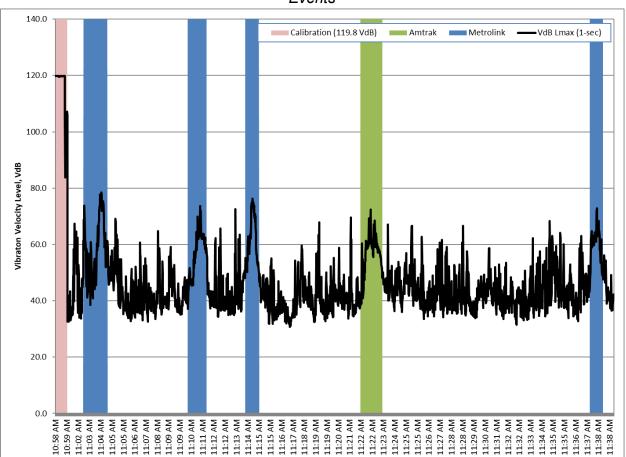


Figure 7-12. Monitoring Location 1a – 1-Second Velocity in Decibels Time History with Rail Events

Table 7-2. Vibration from Train Events at Monitoring Location 1a (William MeadHomes)

Time (AM)	Train	Configuration	Track	Vibration Levels (VdB)	Distance Adjusted to Nearest William Mead Homes Building (VdB)*
11:03–11:04	Metrolink	One locomotive, five cars	Closest	78	69
11:10–11:11	Metrolink	One locomotive, five cars	2nd Closest	74	65
11:14–11:15	Metrolink	One locomotive, four cars	Closest	76	67
11:22–11:23	Amtrak ^a	Two locomotives, eight cars (long distance) One locomotive, six cars (Surfliner)	3rd Closest	72	63





Table 7-2. Vibration from Train Events at Monitoring Location 1a (William Mead Homes)						
Time (AM)	Train	Configuration	Track	Vibration Levels (VdB)	Distance Adjusted to Nearest William Mead Homes Building (VdB)*	
11:37–11:38	Metrolink	One locomotive, six cars	2nd Closest	73	64	

Notes:

Two Amtrak trains passed by between 11:22 AM and 11:23 AM.

^a Adjusted for distance and building structure type

VdB= vibration velocity level in decibels

Measurement results from this location indicate that existing vibration levels from Metrolink trains and Amtrak trains are similar, with the Metrolink trains causing slightly higher vibration levels since they operate on tracks in closer proximity. Additionally, this may be a function of the specific train's speed in combination with the weight of the vehicles as they passed by the vibration monitoring location.

7.2.2 Monitoring Location 3 – Mozaic Apartments

While a noise meter was collecting data for 24 hours on January 24, 2017, at the Amtrak Baggage Handling Building, short-term vibration measurements were completed near ML3 for approximately 1 hour starting at 2:19 PM (Figure 7-13) to obtain a sufficient sample. The monitoring unit was firmly affixed to the sidewalk with adhesive at a distance representative of the corner of the nearest point of the Mozaic Apartment complex to the rail yard platforms. For the purposes of this evaluation, the existing vibration conditions collected at this location were used to characterize the vibration levels for Metro Gateway Childhood Development Center, mainly since the proximity of these two receptors to the measurement location is similar and ML3 is therefore representative of this area as well. Rail vibration events were measured, including the Gold Line, Metrolink, and Amtrak trains, which were operating on several different tracks accessing various platforms.

Adjacent to the sidewalk is a local roadway that, at times, had vehicular traffic while a transit vibration event was also occurring. Vibration levels during train events were variable, with the highest monitored one-1-second VdB of all vibration sources (Table 7-3). Existing vibration levels exceed the FTA/FRA threshold for Category 2 land uses near a frequent rail corridor (Section 5.2.1). The focus of the vibration measurements was to identify vibration from railroad and transit related events; therefore, efforts were not made to specifically log other events, such as automobile passby events. An impact would occur if the Project results in increased vibration levels of 3 VdB or greater than existing levels. Figure 7-14 provides a 1-second time history chart of the monitored VdB, with train events identified.







Figure 7-13. Monitoring Location 3 – Vibration Measurement at Mozaic Apartments

Figure 7-14. Monitoring Location 3 – 1-second Velocity in Decibels with Time History

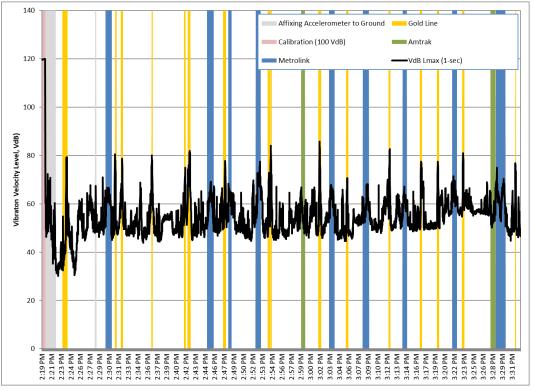






Table 7-3. Vibration from Train Events at Monitoring Location 3 (Mozaic Apartments and Metro Gateway Childhood Development Center)

Time (PM)	Train	Configuration	Track Platform	Distance (feet)	Vibration Levels (VdB)
2:23–2:24	Gold Line	Two vehicles	1	27	79
2:30	Metrolink	Two locomotives, eight cars	5	125	67
2:31	Gold Line	Two vehicles	1	27	79
2:32	Gold Line	Two vehicles	2	63	79
2:36	Gold Line	Two vehicles*	1 and 2	27 and 63	80
2:37	Gold Line	Two vehicles	2	63	76
2:41	Gold Line	Two vehicles	2	63	75
2:42	Gold Line	Two vehicles	1	27	82
2:45–2:46	Metrolink	Two locomotive four cars	7	183	69
2:47–2:48	Gold Line	Two vehicles	1	27	78
2:48	Metrolink	One locomotive, four cars	5	125	68
2:52–2:53	Metrolink	One locomotive, five cars	4	121	77
2:54	Gold Line	Two vehicles	1	27	84
2:59	Amtrak	One locomotive, six cars	10	272	67*
3:01-3:02	Gold Line	Two vehicles	1	27	86*
3:04	Metrolink	One locomotive, four cars	10	272	66
3:05–3:06	Gold Line	Two vehicles	2	63	71
3:08	Metrolink	One locomotive, five cars	9	241	68
3:12	Gold Line	Two vehicles	1	27	83
3:14–3:15	Metrolink	One locomotive, four cars	5	125	67





Table 7-3. Vibration from Train Events at Monitoring Location 3 (Mozaic Apartment	5
and Metro Gateway Childhood Development Center)	

Time (PM)	Train	Configuration	Track Platform	Distance (feet)	Vibration Levels (VdB)
3:17	Gold Line	Two vehicles	1	27	77
3:19	Gold Line	Two vehicles	2	63	78
3:22	Metrolink	One locomotive, six cars	7	183	71*
3:23	Gold Line	Two vehicles	1	27	81
3:27	Amtrak	One locomotive, six cars	10	272	65ª
3:28	Amtrak	One locomotive, six cars	10	237	75
	Metrolink	One locomotive, four cars	3	81	
	Gold Line	Two vehicles	2	63	
3:29–3:30	Metrolink	One locomotive, four cars	3	81	70
3:31	Gold Line	Two vehicles	2	63	77

Notes:

* A truck also passed by the sensor on the nearest roadway during the measurement.

VdB= vibration velocity level in decibels





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8.0 Effects Criteria

For the purposes of this noise and vibration study, the Build Alternative would have an adverse effect relative to noise and vibration if it would result in:

- A. Noise levels in excess of established general plan, noise ordinance, or agency standards.
- B. Excessive groundborne vibration and groundborne noise levels.
- C. A substantial permanent or temporary increase in ambient noise levels.







9.0 Environmental Consequences

9.1 Operational Noise

CRITERIA A AND C	A. Noise levels in excess of established general plan, noise ordinance, or agency standards
AANDC	C. Ambient noise levels (Operations)

The results of the rail noise impact assessment are summarized in Table 9-1 in the 2026 condition, Table 9-2 in the 2031 condition, and Table 9-3 in the 2040 condition at the locations depicted in Figure 6-1.

The discussion below provides the impact assessment for the Build Alternative and the associated operating conditions and increased levels of service in 2026, 2031, and 2040, as described in the *Link US Rail Planning Technical Memorandum* (Metro 2024b).

9.1.1 Build Alternative – 2026 Condition

For the 2026 condition, regional/intercity rail service would operate at increased levels of service compared to existing conditions as described in the *Link US Rail Planning Technical Memorandum* (Metro 2024b). In the throat segment (Segment 1), new lead tracks would not be constructed near William Mead Homes or Care First Village. In the concourse segment (Segment 2), Metro's Gold Line would utilize Tracks 1 and 2 and regional/intercity trains would use the remaining tracks (Tracks 3 through 14). In the run-through segment (Segment 3), construction of two new run-through tracks as part of the Build Alternative would result in a new source of operational noise for land uses nearby.

As shown in Table 9-1, noise levels in the 2026 condition would range from 40 to 67 dBA L_{dn} at Category 2 land uses (i.e., places where people sleep) and 46 to 62 dBA L_{eq} at Category 3 land uses (i.e., La Petite Academy (First 5 LA Headquarters), Ann Street Elementary School, the park/playground at the Care First Village, the park/athletic field near William Mead Homes, and the Metro Gateway Childhood Development Center). In 2026, moderate impacts (see Section 5.1.1 for definition) would occur at 24 multifamily dwelling units (all at William Mead Homes). No moderate or severe impacts would occur at the Care First Village, Mozaic Apartments, Los Angeles County Men's Central Jail and the Twin Towers Correctional Facility, Metro Senior Housing, One Santa Fe Apartments, La Petite Academy (First 5 LA Headquarters), Ann Street Elementary School, the park/playground at the Care First Village, the park/athletic field near William Mead Homes, or the Metro Gateway Childhood Development Center. Although part of the athletic field at William Mead Homes is located within the limits of where moderate impacts are predicted to occur, this is an "active" sports area (running, playing baseball, etc.) and is not considered to be noise sensitive according to FTA guidelines.





Table 9-1. Operational Noise Levels – Build Alternative (2026 Condition)									
				E	Build Alterna	tive			
Noise- Sensitive Area Description	Land Use Category ^a	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts			
William Mead	2	415	69	45–67	0	24			
Homes	3	2	66	50–62	0	0			
Metro Senior Housing	2	123	60	45	0	0			
Los Angeles County Men's Central Jail	2	4,000 ^b	73	49	0	0			
Twin Towers Correctional Facility	2	9,500 ^b	73	50	0	0			
Mozaic Apartments East Building	2	176	67	43–58	0	0			
Mozaic Apartments West Building	2	96	67	41–47 0		0			
La Petite Academy (First 5 LA Headquarters)	5 3 1 64 47		47	0	0				
One Santa Fe Apartments/ Studios	2	438	71	40–57	0	0			
Care First Village	2	232	73	42–59	0	0			
Care i list village	3	1	71	54	0	0			
Metro Gateway Childhood Development Center	3	1	64	46	0	0			





3

Table 9-1. Operational Noise Levels – Build Alternative (2026 Condition)									
				E	Build Alterna	tive			
Noise- Sensitive Area Description	Land Use Categoryª	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts			
Total	2	14,980 ^b	60–73	40–67	0	24			

64-71

47-62

0

Notes:

^a Category 2 land uses are assessed using Ldn and Category 3 land uses are assessed using Leq.

4

^b Approximately 4,000 inmates are housed at the Los Angeles Central Jail and 9,500 inmates are housed at the Twin Towers Correctional Facilities. Neither facility provides outdoor use areas for prisoners; therefore, only interior noise levels are of concern. The prisons are built out of concrete and have thick windows to keep prisoners inside; therefore, interior sound levels are estimated to be at least 20 dBA lower than those calculated at the exterior of each facility.
 dBA=A-weighted decibel; L_{dn}=day-night average sound level used for Category 2 land uses, L_{eq}=equivalent noise level used for Category 3 Land Uses

Based on the results in Table 9-1, no adverse effect would occur because impacts are considered moderate. The FRA and FTA manuals include provisions for consideration of mitigation for moderate impacts, although mitigation is not required for moderate impacts. Although implementation of Mitigation Measure NV-1 (described in Section 11.1) is not required in the 2026 condition because impacts are not severe, Metro may elect to construct the sound walls in accordance with Mitigation Measure NV-1 (described in Section 11.1) earlier than 2031 to reduce construction-related noise impacts and/or moderate operational noise impacts from increased train movements that may occur as early as 2026. The dimensions of the noise wall will be finalized during final design.

Figure 9-1 depicts the noise contours associated with the moderate impact areas at William Mead Homes for the 2026 condition. Noise levels at each individual modeled receiver are provided in Appendix C.





0







Figure 9-1. Noise Impact Areas at William Mead Homes – Build Alternative (2026 Condition)



Private At-Grade Crossing



use)

Severe Impact Limit





9.1.2 Build Alternative – 2031 Condition

For the 2031 condition, regional/intercity rail service would operate at increased levels compared to existing and 2026 conditions, as described in the *Link US Rail Planning Technical Memorandum* (Metro 2024b). In the throat segment (Segment 1), one new lead track would be constructed within the railroad ROW in closer proximity to William Mead Homes (Building 16) and Care First Village. In the concourse segment (Segment 2), Metro's Gold Line would utilize Tracks 1 and 2 and regional/intercity trains would use the remaining tracks (Tracks 3 through 14). In the run-through segment (Segment 3), construction of additional run-through tracks would result in increased operation-related noise levels for people present nearby.

As shown in Table 9-2, noise levels in the 2031 condition would range from 44 to 75 dBA L_{dn} at Category 2 land uses (i.e., places where people sleep) and 50 to 71 dBA L_{eq} at Category 3 land uses (i.e., Ann Street Elementary School, La Petite Academy, a park/playground at the Care First Village, the park/athletic field near William Mead Homes, and the Metro Gateway Childhood Development Center).

Also shown in Table 9-2, in the 2031 condition, the Build Alternative would result in moderate impacts on 34 multifamily dwelling units (16 William Mead Homes dwelling units, 15 Care First Village dwelling units, and 3 Mozaic Apartment dwelling units) and severe impacts on 34 multifamily dwelling units (24 William Mead Homes dwelling units and 10 dwelling units at the Care First Village) and one park/athletic field near William Mead Homes. Category 2 and 3 land uses that would be subject to severe impacts are shown on Figure 9-2. Land uses not subject to severe noise impacts in the 2031 condition are not depicted on Figure 9-2. The following discussion provides additional information on the impacts to noise-sensitive receptors and the mitigation for each receptor, as applicable:

- For William Mead Homes, severe impacts in the 2031 condition is considered an adverse effect. Mitigation Measure NV-1 (described in Section 11.1) requires Metro to implement a sound wall within the railroad ROW along the perimeter of the William Mead Homes property. Implementation of Mitigation Measure NV-1 would reduce adverse operational noise effects by reducing noise levels lower than the FTA severe impact criteria.
- For the Care First Village, severe impacts in the 2031 condition are considered an adverse effect. Mitigation Measure NV-1 (described in Section 11.1) requires Metro to implement a sound wall within the railroad ROW along the perimeter of the Care First Village property. Implementation of Mitigation Measure NV-1 would reduce adverse operational noise effects by reducing noise levels lower than the FTA severe impact criteria.
- For the Mozaic Apartments, exterior noise levels at the Mozaic Apartments would result in moderate noise impacts at three dwelling units, specifically at the balconies of the units located closest to LAUS. Mitigation measures are not proposed because severe impacts would not occur and the exterior areas (balconies) of the Mozaic Apartments are already exposed to relatively high existing noise levels from transit and railroad operations located at LAUS (see Section 7.1.3). Right of entry to both interior and exterior areas was not granted by the owner of the Mozaic Apartments to document existing noise exposure from





LAUS. The Mozaic Apartments were constructed in 2005 and, as part of the planning process, the developer was required to design the development in accordance with City of Los Angeles Municipal Code, Section 91.1207.14.2 since it is located in close proximity to railroad tracks. The city's code requires that new buildings located in close proximity to train tracks be constructed in such a manner to ensure interior sound levels are 45 dBA L_{dn} or lower. With or without implementation of the Build Alternative, interior sound levels are assumed to be 45 dBA L_{dn} or lower because noise attenuation measures in the form of thick pane windows and concrete structures (as opposed to other noise absorbing materials) are already in place, as required by the City of Los Angeles.

- The Los Angeles County Men's Central Jail and the Twin Towers Correctional Facility do not have outdoor uses and the building interiors are not predicted to be subjected to noise levels that exceed severe or moderate noise limits. Additionally, these two facilities comprises buildings made with concrete with thick windows. Interior noise levels are estimated to be at least 20 dB lower than those experienced at the exterior of these structures consistent with Federal Highway Administration guidance for interior sound level attenuation, which would be similar for railroad noise sources (Federal Highway Administration 2011). Interior noise levels would be below 45 dBA L_{dn}, which is a level that the U.S. Environmental Protection Agency has identified as a level that does not interfere with interior activities (e.g., speech and sleeping) and has a low potential for annoyance (U.S. Environmental Protection Agency 1978). No adverse effect would occur.
- For the Metro Senior Housing, Ann Street Elementary School, La Petite Academy, and One Santa Fe Apartments, no moderate or severe impacts were identified. No adverse effect would occur.

Figure 9-3 depicts the noise contours associated with moderate and severe impact areas at William Mead Homes in the 2031 condition without mitigation. Figure 9-4 depicts the moderate and severe impact areas at Care First Village in the 2031 condition without mitigation. Noise levels at each individual modeled receiver are provided in Appendix C.

Table 9-2. Operational Noise Levels – Build Alternative (2031 Condition)								
				Build Alternative				
Noise- Sensitive Area Description	ive Area Land Use Sensitive Uses		Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts		
William Mead	2	415	69	55–75	24	16		
Homes	3	2	66	62–71	1	0		
Metro Senior Housing	2	123	60	55	0	0		







Table 9-2. Operational Noise Levels – Build Alternative (2031 Condition)									
				E	Build Alterna	tive			
Noise- Sensitive Area Description	Land Use Category ^a	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts			
Los Angeles County Men's Central Jail	2	4,000 ^b	73	59	0	0			
Twin Towers Correctional Facility	2	9,500 ^b	73	55	0	0			
Mozaic Apartments East Building	2	176	67	67 49–63		3			
Mozaic Apartments West Building	2	96	67	47–52	0	0			
La Petite Academy (First 5 LA Headquarters)	3	1	64	64 50		0			
One Santa Fe Apartments/ Studios	2	438	71	44–59	0	0			
Care First Village	2	232	73	52–72	10	15			
Care i not vinage	3	1	71	65	0	0			
Metro Gateway Childhood Development Center	3	1	64	51	0	0			





Table 9-2. Operational Noise Levels – Build Alternative (2031 Condition)									
Build Alterr						tive			
Noise- Sensitive Area Description	Land Use Category ^a	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts			
Total	2	14,980 ^b	60–73	44–75	34	34			
	3	4	64–71	50–71	1	0			

Notes:

^a Category 2 land uses are assessed using Ldn and Category 3 land uses are assessed using Leq.

^b Approximately 4,000 inmates are housed at the Los Angeles Central Jail and 9,500 inmates are housed at the Twin Towers Correctional Facilities. Neither facility provides outdoor use areas for prisoners; therefore, only interior noise levels are of concern. The prisons are built out of concrete and have thick windows to keep prisoners inside; therefore, interior sound levels are estimated to be at least 20 dBA lower than those calculated at the exterior of each facility.

dBA=A-weighted decibel; L_{dn}=day-night average sound level used for Category 2 land uses, L_{eq}=equivalent noise level used for Category 3 Land Uses





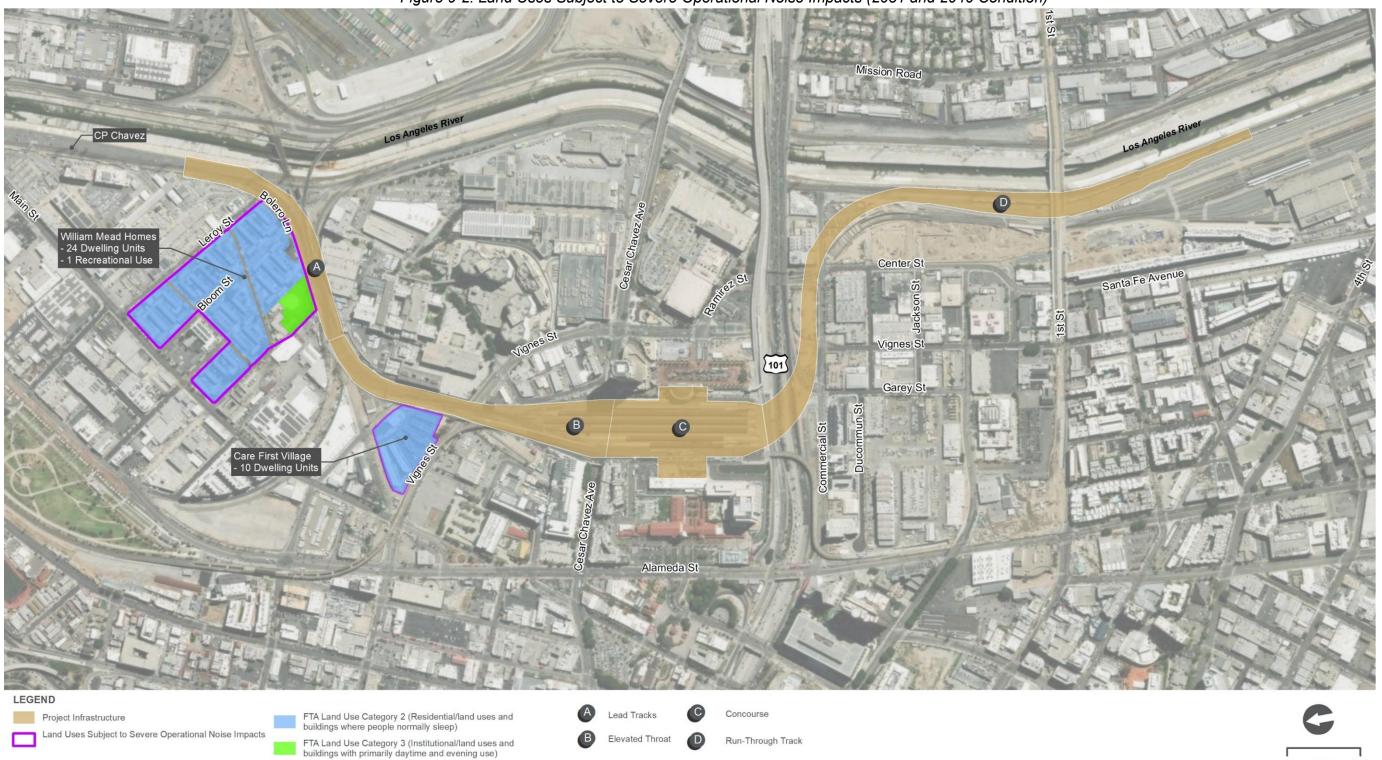


Figure 9-2. Land Uses Subject to Severe Operational Noise Impacts (2031 and 2040 Condition)

Notes:

Land uses not subject to severe noise impacts in the 2031 and 2040 Condition are not depicted on Figure 9-2.













Figure 9-3. Noise Impact Areas at William Mead Homes – Build Alternative without Mitigation (2031 Condition)











Figure 9-4. Noise Impact Areas at the Care First Village – Build Alternative without Mitigation (2031 Condition)









9.1.3 Build Alternative – 2040 Condition

Build Alternative

As shown in Table 9-3, noise levels in the 2040 condition would range from 43 to 75 dBA L_{dn} at Category 2 land uses (i.e., places where people sleep) and 50 to 71 dBA L_{eq} at Category 3 land uses (i.e., Ann Street Elementary, La Petite Academy, the park/playground at the Care First Village, the park/athletic facility near William Mead Homes, and the Metro Gateway Childhood Development Center).

As shown in Table 9-3, in the 2040 condition, the Build Alternative would result in moderate impacts on 25 multifamily dwelling units (16 dwelling units at William Mead Homes and 9 dwelling units at the Mozaic Apartments) and severe impacts on 34 multifamily dwelling units (24 dwelling units at William Mead Homes and 10 dwelling units at Care First Village) and 1 park/athletic field near William Mead Homes. Category 2 and 3 land uses that would be subject to severe impacts are shown on Figure 9-2. Land uses not subject to severe noise impacts in the 2040 condition are not depicted on Figure 9-2. The following discussion provides additional information on the impacts to noise-sensitive receptors and the mitigation for each receptor, as applicable:

- For William Mead Homes, severe impacts in the 2040 condition are considered an adverse effect. Implementation of Mitigation Measure NV-1 (discussed above and described in Section 11.1) would reduce adverse operational noise effects by reducing noise levels lower than the FTA severe impact criteria.
- For the Care First Village, severe impacts in the 2040 condition are considered an adverse effect. Implementation of Mitigation Measure NV-1 (discussed above and described in Section 11.1) would reduce adverse operational noise effects by reducing noise levels lower than the FTA severe impact criteria.
- For the Mozaic Apartments, although noise attenuating measures are already in place, moderate impacts would occur at 9 dwelling units. For the same reasons as described previously, mitigation measures are not proposed for the same reasons described above. Additionally, over 80 percent of the train movements would occur during daytime hours, during the peak-period, rather than during nighttime hours when rail activity could result in greater sleep disturbance. Therefore, no mitigation measures are proposed.
- For the Los Angeles County Men's Central Jail and the Twin Towers Correctional Facility, interior noise levels at the facilities would be 45 dBA L_{dn} or lower for the same reasons described above. No adverse effect would occur.
- For the Metro Senior Housing, Ann Street Elementary School, La Petite Academy, and One Santa Fe Apartments, no moderate or severe impacts were identified. No adverse effect would occur.

Figure 9-5 depicts the noise contours associated with moderate and severe noise impact areas at William Mead Homes in the 2040 condition without mitigation. Figure 9-6 depicts the moderate





and severe impact areas at Care First Village in the 2040 condition without mitigation. Noise levels at each individual modeled receiver are provided in Appendix C.

Table 9-3. Operational Noise Levels – Build Alternative (2040 Condition)									
				Build Alternative					
Noise- Sensitive Area Description	Land Use Category ^a	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts			
William Mead	2	415	69	51–75	24	16			
Homes	3	2	66	55–71	1	0			
Metro Senior Housing	2	123	60	51	0	0			
Los Angeles County Men's Central Jail	2	4,000 ^b	73	59	0	0			
Twin Towers Correctional Facility	2	9,500 ^b	73	55 0		0			
Mozaic Apartments East Building	2	176	67	49–64	0	9			
Mozaic Apartments West Building	2	96	67	46–53	0	0			
La Petite Academy (First 5 LA Headquarters)	3	1	64	50	0	0			
One Santa Fe Apartments/ Studios	2	438	71	43–59	0	0			
Care First Village	2	232	73	51–72	10	0			
	3	1	71	65	0	0			
Metro Gateway Childhood Development Center	3	1	64	52	0	0			





Table 9-3. Operational Noise Levels – Build Alternative (2040 Condition)								
				E	Build Alterna	tive		
Noise- Sensitive Area Description	Land Use Category ^a	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts		
Project Total	2	14,980 ^b	60–73	43–75	34	25		
	3	4	64–71	50–71	1	0		

Notes:

^a Category 2 land uses are assessed using Ldn and Category 3 land uses are assessed using Leq.

^b Approximately 4,000 inmates are housed at the Los Angeles Central Jail and 9,500 inmates are housed at the Twin Towers Correctional Facilities. Neither facility provides outdoor use areas for prisoners; therefore, only interior noise levels are of concern. The prisons are built out of concrete and have thick windows to keep prisoners inside; therefore, interior sound levels are estimated to be at least 20 dBA lower than those calculated at the exterior of each facility.

dBA=A-weighted decibel; L_{dn}=day-night average sound level used for Category 2 land uses, L_{eq}=equivalent noise level used for Category 3 Land Uses











Figure 9-5. Noise Impact Areas at William Mead Homes – Build Alternative without Mitigation (2040 Condition)

CALIFORNIA

---- Rail Right-of-way

Private At-Grade Crossing



0 Feet 75

use)

/ Moderate Impact Limit

Severe Impact Limit

and buildings where people normally sleep)

FTA Land Use Category 3 (Institutional/land uses and buildings with primarily daytime and evening





Figure 9-6. Noise Impact Areas at the Care First Village - Build Alternative without Mitigation (2040 Condition)











9.1.4 No Action Alternative

Under the No Action Alternative, no Project-related construction noise impacts on sensitive receptors would occur. Reasonably foreseeable future projects, as described in Section 3.16, Cumulative Effects, and other planned improvements as part of the 2020–2045 RTP/SCS would still occur under the No Action Alternative along with other maintenance activities in the railroad ROW. Construction of other projects in the vicinity of sensitive receptors would likely result in some form of construction noise and the magnitude of construction noise impacts would vary depending on the location of each project and the associated construction activities. The impacts of other projects would be addressed during the environmental review and entitlement processes and measures may be required to avoid, minimize, and/or mitigate the potential for adverse effects.

Due to the physical capacity constraints at LAUS, noise levels would remain high for sensitive receptors located near the existing track alignment, and train movements in the Project study area are assumed to remain similar to existing conditions. Operational noise levels are anticipated to correspond to existing frequency for train movements and would therefore remain unchanged. No new severe or moderate impacts would occur at William Mead Homes, Care First Village, or Mozaic Apartments through 2040.

9.2 Operational Vibration

CRITERION	Exposure of persons to, or generation of, excessive groundborne vibration
В	or groundborne noise levels

Any vibration-sensitive land uses and structures would be limited to those Category 2 land uses within 200 feet of the track alignment (i.e., the screening distance per FTA guidance). Category 2 uses within 200 feet include the first row of buildings at William Mead Homes, about half of each of the two multi-story buildings and most of the single-story buildings at Care First Village, and a portion of the front row building at the Mozaic Apartment complex. The results of the vibration analysis are provided in Table 9-4.

9.2.1 Build Alternative (2026)

In the 2026 condition, although additional train movements would occur, there would be no changes to train speeds or the track alignment in Segment 1 of the Project study area near William Mead Homes or the Care First Village and, consequently, there would be no changes to vibration levels. While the frequency of vibration events would increase with additional rail traffic the corridor is already characterized as a frequent vibration source and assessed accordingly. No adverse effect would occur. In Segments 2 and 3 of the Project study area, the track alignment would change slightly to accommodate Platform 4 modifications, a temporary run-through track ramp, and new run-through tracks crossing US-101. No appreciable change would occur at the front row building of the Mozaic Apartment complex, with regional/intercity rail trains operating at 10 miles per hour on Tracks 3 and 4.





Table 9-4. Groundborne Vibration and Groundborne Noise Levels									
			2026		20	031	2040		
		Existing Condition	Build Build Alternative Alternative A					uild native	
Location	Rail Line	VdB	VdB	dBA ^a	VdB	dBA ^a	VdB	dBA ^a	
William Mead	HSR	—			c	—	55	5	
Homes ^b	Regional/ Intercity Rail	69	No C	hange	68	18	68	18	
Care First	HSR	—	No Change		c	-	68	18	
Village	Regional/ Intercity Rail	_			71	21	71	21	
	Gold Line		57	7	57	7	57	7	
Terminal Annex	HSR	Not Measured	c	—	c	—	54	4	
	Regional/ Intercity Rail		53	3	53	3	53	3	
	Gold Line	84	55	5	55	5	55	5	
Mozaic Apartments	HSR	—	c	—	c	—	43	<1	
Apartments	Regional/ Intercity Rail	77	56	6	56	6	56	6	

Notes:

^a FTA indicates that typical groundborne noise in dBA is calculated by subtracting 50 dB from the calculated VdB value. See Section 5.2 for vibration thresholds.

^b The westernmost William Mead Home building closest to the Build Alternative is within 200 feet but beyond 100 feet from crossovers.

^c HSR infrastructure in the interim phase of the Project would operate conventional passenger rail. dBA=A-weighted decibel; HSR=high-speed rail; VdB= vibration velocity level in decibels

Table 9-4 identifies that in the 2026 condition, operational groundborne vibration and noise levels would be below the FTA impact criteria for Category 2 and Category 3 land uses (FTA 2018). Additionally, there are no predicted increases of 3 VdB or greater from operation in the 2026 condition; therefore, no operational, groundborne vibration or groundborne noise impacts are predicted. No direct adverse effects would occur during operation of the Build Alternative in the 2026 condition.





9.2.2 Build Alternative (2031)

For the Build Alternative, regional/intercity rail trains would operate on new lead tracks within the existing railroad ROW as close as 100 feet from the buildings within William Mead Homes whereas currently tracks are about 12 feet farther away, all with trains at speeds of up to 35 miles per hour. Trains would operate within 75 feet of the Care First Village at 25 miles per hour.

Table 9-4 identifies that in the 2031 condition, operational, groundborne vibration and noise levels would be below the FTA impact criteria for Category 2 and Category 3 land uses (FTA 2018). Additionally, there are no predicted increases of 3 VdB or greater from operation in the 2031 condition; therefore, no operational, groundborne vibration or groundborne noise impacts are predicted. No direct adverse effects would occur during operation of the Build Alternative in the 2031 condition.

9.2.3 Build Alternative (2040)

For the Build Alternative, in the 2040 condition, regional/intercity trains and HSR trains would operate on shared tracks as close as 100 feet from the William Mead Homes buildings. HSR trains would operate as close as 75 feet from the Care First Village. The Build Alternative in the 2040 condition would result in increased train movements in close proximity to the Mozaic Apartments, with the Gold Line trains as close as 40 feet, HSR trains as close as 75 feet, and regional/intercity rail trains as close as 185 feet. The estimate of train movements is conservative to assess the highest anticipated vibration levels at the Category 2 land uses, meaning that the rail vehicle with the highest potential for operational vibration on a given track is assumed for the analysis.

The Terminal Annex building includes a large computer server. FTA generally does not consider these types of facilities sensitive to vibration; however, to address concerns identified in scoping, this building is considered a Category 3 vibration-sensitive use for the purpose of this analysis. The Terminal Annex is located 85 feet from the Gold Line within the screening distance identified in Chapter 4.0 of this report.

Table 9-4 identifies that in the 2040 condition, operational, groundborne vibration and noise levels would be below the FTA impact criteria for Category 2 and Category 3 land uses (FTA 2018). Additionally, there are no predicted increases of 3 VdB or greater from operation in the 2040 condition; therefore, no operational, groundborne vibration or groundborne noise impacts are predicted. No adverse direct effects would occur during operation of the Build Alternative in the 2040 condition.

9.2.4 No Action Alternative

Under the No Action Alternative, operational vibration levels would remain unchanged from the existing condition. Reasonably foreseeable future projects, as described in Section 3.16, Cumulative Effects of the Link Union Station EIS/SEIR, and other planned improvements as part of the 2020-2045 RTP/SCS would still occur under the No Action Alternative along with other maintenance activities in the railroad ROW. Construction of other projects in the vicinity of





sensitive receptors would likely result in some groundborne vibration if specific construction equipment is used, and the magnitude of groundborne noise impacts would vary depending on the location of each project and the associated construction activities and equipment. The impacts of other projects would be addressed during the environmental review and entitlement processes and measures may be required to avoid, minimize, and/or mitigate the potential for adverse effects. No new operational direct adverse effects would occur.

9.3 Construction Noise

CRITERION	Result in a substantial temporary or periodic increase in ambient noise
D	levels in the Project vicinity above levels existing without the Project

9.3.1 Build Alternative

Construction of the Build Alternative would take place in phases over the course of approximately 6 years. Construction activities associated with the Project would result in temporary periods of relatively high noise levels. The noise levels from construction activities were estimated using the method described in Section 4.3. The results are summarized in Table 9-5, which provides estimates of peak day noise levels for each construction phase and segment. This noise and vibration impact evaluation is conservative and adequately addresses any potential effects that could occur in the interim condition because the detailed construction scenario prepared to support the environmental impact evaluation assumes all major Project elements would be constructed concurrently. If run-through track infrastructure south of LAUS is constructed as part of the interim condition prior to the elevated rail yard and new passenger concourse, fewer construction-related noise and vibration impacts (based on reduced equipment use) are anticipated than reported herein because the greatest amount of potential effects are addressed within this analysis.

As an example, if the run-through track infrastructure is constructed as early as 2026, the construction noise and vibration associated with those tracks would not occur in later years as is currently assumed in this analysis. It is anticipated that these run-through tracks would be constructed roughly where existing Tracks 3 and 4 are currently located, which is in close proximity to the Mozaic Apartments. Construction noise and vibration that would have occurred during the build out would no longer occur in later years of Project development; therefore, construction noise levels would be lower than those identified in Table 9-5.

During construction, impacts would occur at Category 2 land uses at distances of up to approximately 250 feet under daytime (7:00 AM to 10:00 PM) impact criteria (i.e., 80 dBA L_{eq}) and approximately 300 feet under nighttime (10:00 PM to 7:00 AM) impact criteria (i.e., 70 dBA L_{eq}). Similar to other recently completed transportation infrastructure projects in the surrounding area, it is anticipated that some construction work would take place during nighttime hours to achieve the efficiencies of working during off-peak times of the day and meet Metro's desired construction completion timeframe.





As shown on Figure 9-7, the following Category 2 and 3 land uses would be subject to construction noise that exceeds the City's 75 dBA limit:

- William Mead Homes 41 dwelling units and one recreational use;
- Care First Village approximately 36 dwelling units and a playground/park;
- Mozaic Apartments 82 dwelling units; and,
- Metro Gateway Childhood Development Center.

Land uses not subject to severe noise impacts during construction are not depicted on Figure 9-7.

Detailed calculations of construction noise at noise sensitive receptors are provided in Appendix C. This is considered an adverse effect.

In addition to the construction-related impacts of the Build Alternative described above, at William Mead Homes and Care First Village specifically, construction of the sound walls required as part of Mitigation Measure NV-1 (described in Section 11.1) would also result in construction noise impacts from use of heavy machinery as presented in Table 9-6.









Table 9-5. Co	Table 9-5. Construction Noise Levels										
								Sound	Level (L	_{-eq}) at D	istance ^c
				Equipmen	t ^a		Var	iable D	istance	s (feet)	
Phase	Sub-Phase	Туре	Quantity	Usage Factor (%)	L _{max} at 50' ^b	50	100	200	400	800	1,000
		Drill rig	1	20	79						
		Wheel loader	4	40	79	86 80		68	62		
		Excavator	3	40	81		0 74				
Segment 1: Throat Segment	—	Concrete mixer truck	1	40	79					60	
		Crane	1	16	81						
		Forklift	2	20	75						
		Water truck	2	40	74						
		Drill rig	1	20	79						
		Wheel loader	4	40	79						
Segment 2:		Excavator	3	40	81						
Concourse Segment	—	Concrete mixer truck	1	40	79	86	80	74	68	62	60
		Crane	1	16	81						







2

2

20

40

75

74

Forklift

Water truck

Table 9-5. Construction Noise Levels											
			Composite Sound Level (L _{eq}) at Dist					istance ^c			
			Equipment ^a			Variable Distances (feet)					
Phase	Sub-Phase	Туре	Quantity	Usage Factor (%)	L _{max} at 50' ^b	50	100	200	400	800	1,000
	Cast-in-drilled-hole piles	Drill rig	2	20	79				67	61	59
		Wheel loader	2	40	79						
Segment 3: Run-Through Segment		Concrete pump	2	20	81	85	85 79				
		Concrete mixer truck	4	40	79	00 10		73			
		Crane	1	16	81						
		Haul truck	2	40	76						
	Superstructure Placement	Concrete pump	2	20	81	83 77				59	57
		Concrete mixer truck	3	40	79			71	65		
		Forklift	2	20	75			/ 1	00	55	
		Crane	2	16	81						
	Pile Driving for Abutments	Pile driving machine	1	20	101			82	76	70	68
		Wheel loader	1	40	79	94	88				
		Crane	1	16	81						
	Bridge Earthwork	Excavator	1	40	81	81	75	69	63	57	55





Table 9-5. Construction Noise Levels												
							Composite Sound Level (L _{eq}) at Distance ^c					
		Equipment ^a			Variable Distances (feet)							
Phase	Sub-Phase	Туре	Quantity	Usage Factor (%)	L _{max} at 50' ^b	50	100	200	400	800	1,000	
		Wheel loader	1	40	79							
		Hauling truck		76								
		Water truck	1	40	74							
		Dozer	2	40	82						58	
	BNSF West Bank Yard Earthwork BNSF West Bank Yard Rail Placement	Wheel loader	2	40	79	84	84 78 72		66	60		
		Haul truck	2	40	76							
		Water truck	1	40	74							
		Compactor	1	20	83	85	79	73	67	61	59	
		Ballast regulator	4	50	82					0.		

Notes:

^a Equipment mix obtained from the proposed action's engineers 7/8/2016

^b Measured Lmax at given reference distance obtained from the FHWA Roadway Construction Noise Model, FHWA 2006 and/or FTA Noise and Vibration Guidance 2006.

^c Distance factor determined by the inverse square law defined as 6 dBA per doubling of distance as sound travels away from an idealized point.

Usage factor assumed to be that identified in the 2006 FHWA Roadway Construction Noise Model.

L_{eq}=equivalent noise level; L_{max}=maximum sound level





Table 9-6. Sound Wall Construction Noise Levels											
				Composite dBA L _{eq} (hourly) at Distance							
Equipment	Quantity	Usage Factor (%)	L _{max} at 50 feet	50 feet	100 feet	200 feet	400 feet	500 feet			
Backhoe	1	40	78		73	67	61	59			
185 cubic foot per minute compressor	1	40	78	79							
Concrete pump truck	1	20	81	10							
400-amp welder	1	40	74								

Notes:

Usage factors obtained from the 2006 FHWA Roadway Construction Noise Model dBA=A-weighted decibel; L_{eq}=equivalent noise level; L_{max}=maximum sound level





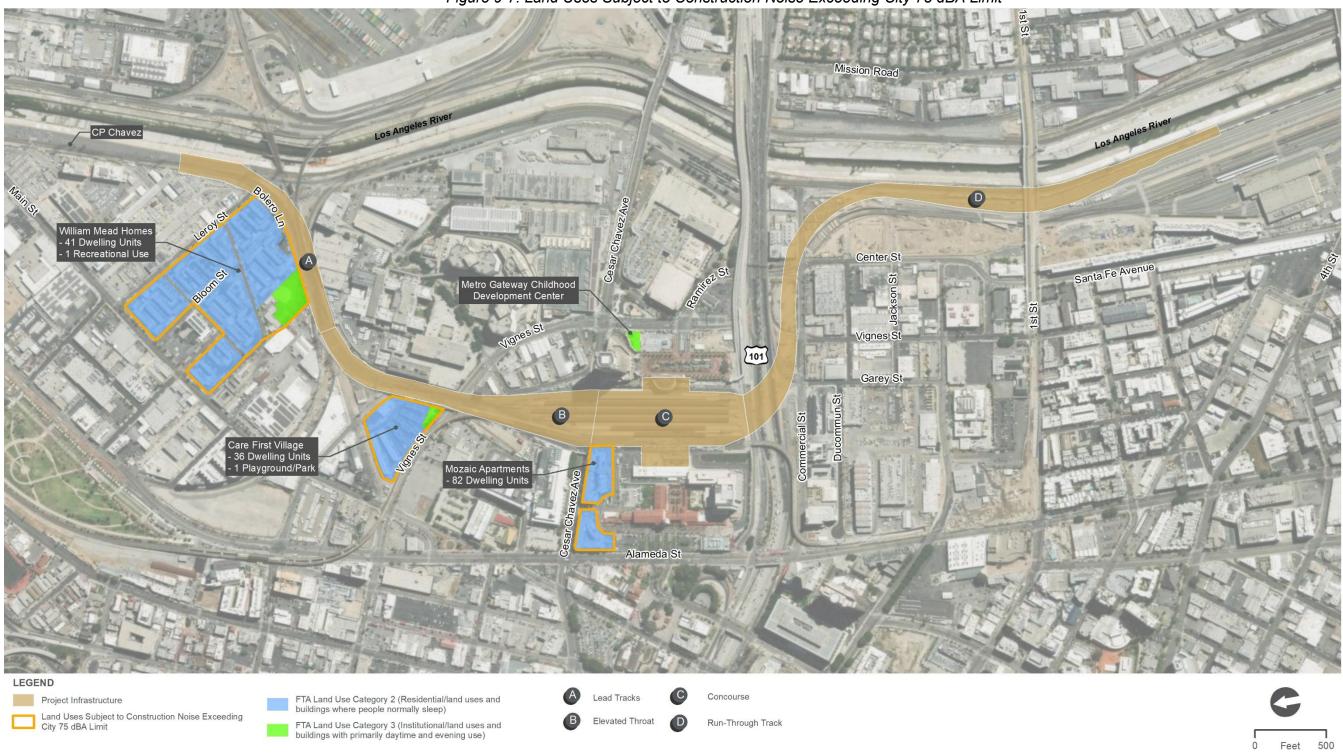


Figure 9-7. Land Uses Subject to Construction Noise Exceeding City 75 dBA Limit

Notes:

Land uses not subject to severe noise impacts during construction are not depicted on Figure 9-7.









For sound wall construction, Category 2 land uses (i.e., residential) within the respective daytime and nighttime impact distances (250 feet and 300 feet) include William Mead Homes and Care First Village; therefore, the construction noise impact from sound wall construction is also considered a temporary adverse effect. Additionally, the city's limit would be exceeded at some receivers. Detailed calculations of construction noise at noise-sensitive receptors are provided in Appendix C. Mitigation Measure NV-2 (described in Section 11.2) requires implementation of noise- and vibration-reducing measures including, but not limited to, constructing walled enclosures around loud activities, restricting pile driving to daytime periods, and rerouting truck traffic away from residential streets. Mitigation Measure NV-3 requires implementation of a proactive Community Notification Plan to address community concerns related to potential noise and vibration impacts. Implementation of Mitigation Measures NV-2 and NV-3 would reduce adverse construction-related noise effects and the annovances caused by construction-related noise impacts (in addition to vibration impacts). Direct noise impacts would be reduced through implementation of Mitigation Measures NV-2 and NV-3. These mitigation measures are intended to minimize adverse effects by identifying noise exceedances and requiring that the construction contractor address noise exceedances that occur by applying additional mitigation; however, some receptors would still be subject to construction-related noise impacts that would exceed applicable thresholds. Therefore, temporary impacts would remain adverse.

9.4 Construction Vibration

CRITERIONExposure of persons to, or generation of, excessive groundborne vibrationBor groundborne noise levels.

9.4.1 Build Alternative

Construction of the Build Alternative would result in temporary vibration from use of heavy equipment and machinery. Building demolition would also be required in limited circumstances south of US-101. The vibration levels from construction activities were estimated using the method described above, and the results are summarized in Table 9-7.

Two pieces of construction equipment (pile driver and vibratory roller) were utilized in this assessment because those pieces of equipment have the highest construction vibration levels anticipated to be utilized during construction. Unlike prediction of construction noise where multiple pieces of equipment are additive to predict the overall sound level, typical vibration levels are predicted using the equipment with the highest vibration level and other vibration sources are not additive. Vibration from pile driving has the highest vibratory level. Pile driving would only occur for limited durations and at only a few select locations due to the nature of proposed infrastructure. The vibratory roller is more likely to be used, especially in areas near noise-sensitive receivers. Table 9-7 indicates that beyond approximately 50 feet of pile driving activity, there would be no vibration-related structural damage. The vibratory roller is not predicted to damage structures because the vibratory roller would not be used within 25 feet of a sensitive structure, a distance that eliminates concern of structural damage. The source levels are





estimates provided in the FTA guidance and are generally conservative; however, it is possible that ultimately whatever pile driver is used may have a different source level.

From an annoyance perspective, impact pile driving would be characterized as a frequent source of vibration, as there would be more than 70 pile strikes (or events) per day. The Mozaic Apartments are the nearest sensitive land use and are located within 300 feet of where pile driving activities would occur if this construction technique is utilized. Additionally, use of the vibratory roller may occur continuously over the course of several days near sensitive land uses and would be considered a frequent vibration source during construction. The vibratory roller would be used in closer proximity to sensitive areas, such as William Mead Homes (Category 2 land use). Per the FTA manual, the frequent impact threshold for Category 2 land uses is 72 VdB (FTA 2018).

Vibration from construction could be considered an annovance to residential land uses situated within approximately 300 feet of an impact pile driver and 140 feet of the vibratory roller. However, pile-driving activities would be restricted within 50 feet of a sensitive land use and, therefore, impacts from a damage perspective would not occur. Nevertheless, because construction would occur within 300 feet from sensitive land uses for an impact pile driver and within 140 feet for the vibratory roller, a severe impact may occur at William Mead Homes, Care First Village, and the Mozaic Apartments from an annovance perspective. This is considered an adverse effect. Mitigation Measure NV-2 (described in Section 11.2) requires implementation of noise- and vibration-reducing measures including, but not limited to, constructing walled enclosures around loud activities, restricting pile driving to daytime periods, and rerouting truck traffic away from residential streets to reduce construction-related vibration impacts. Implementation of Mitigation Measure NV-3 (described in Section 11.2) requires implementation of a proactive Community Notification Plan to address community concerns related to potential noise and vibration impacts. Mitigation Measures NV-2 and NV-3 would reduce the annoyances caused by constructionrelated vibration impacts and would reduce adverse construction-related vibration effects. Detailed construction vibration calculations are provided in Appendix C.

9.4.2 No Action Alternative

Under the No Action Alternative, no vibration from construction equipment, specifically impact pile drivers and vibratory rollers, would cause annoyance to vibration-sensitive land uses near the construction zones. Therefore, no construction-related direct adverse effects from vibration would occur.





Table 9-7.	Groundbo	rne Vi	bration Le	evels (Construc	tion)								
	PPV at	VdB	50 fee	ət	75 fee	ət	100 fe	et	150 fe	et	200 fe	et	300 fe	et
Equipment	25 feet (inch/ second)	at 25 feet	PPV (inch/ second)	VdB	PPV (inch/ second)	VdB	PPV (inch/ second)	VdB	PPV (inch/ second)	VdB	PPV (inch/ second)	VdB	PPV (inch/ second)	VdB
Impact pile Driver	0.644	104	0.228	95	0.124	90	0.081	86	0.044	80	0.028	77	0.015	72
Vibratory roller	0.21	94	0.074	85	0.040	80	0.026	76	0.014	70	0.009	67	0.005	62

Notes:

PPV=peak particle velocity; VdB=vibration velocity level in decibels









10.0 Cumulative Impacts Related to Noise and Vibration

Projects considered in the cumulative analysis include local development and transportation projects, as well as general growth within the SCAG region. This noise and vibration analysis includes an assessment of estimated train movements at LAUS and in the Project study area to support forecasted population growth; therefore, the direct impact analysis already considers the cumulative noise levels and associated impacts of regional/intercity rail and HSR operational noise and vibration (2040 condition).

Cumulative noise and vibration impacts were considered by the SCAG as part of the Program Environmental Impact Report (PEIR) prepared for the 2020 RTP/SCS (SCAG 2020). The cumulative regional noise and vibration impacts identified in that PEIR include those typically associated with improvements along transportation corridors (e.g., railroads, highways, and transit). The most prevalent noise sources identified in the 2020 RTP/SCS would be associated with roadway vehicle traffic, rail/transit, and aviation activity. Several impacts were identified within 500 feet of major transportation sources of noise, including rail lines used by regional/intercity rail and HSR.

Construction and operation of cumulative projects, including other infrastructure improvements outside of the Project study area required to implement system-wide efficiencies and changes in regional/intercity operations from implementation of the Southern California Optimized Rail Expansion Program, would add noise to the current noise environment and also reduce noise, if all improvements are fully implemented. For example, if rail projects such as Link US are built, some trips that people would otherwise make by car or via airplane would be offset by using regional/intercity trains. It is anticipated that all transportation sectors would gradually increase in noise as a result of the land use changes and transportation projects identified in the 2020 RTP/SCS PEIR.

Construction of other projects in the Project study area could occur concurrently, which cumulatively could also result in increased noise and vibration at noise-sensitive receptors. The greatest potential for a cumulative impact on the local noise environment would be the incremental addition of new regional/intercity rail service combined with HSR operations. As provided in the Project-level analyses prior to implementation of mitigation, moderate and severe impacts would occur at William Mead Homes, Care First Village, and the Mozaic Apartments. Combined with other cumulative projects, these noise impacts could be cumulatively significant.

Program-level mitigation measures are identified in the RTP/SCS PEIR, demonstrating that some form of mitigation is possible, and should be considered when moderate impacts occur and required when severe impacts occur consistent with FTA and FRA guidance. In the program-level environmental analysis for the RTP/SCS, noise walls near highways are identified as a potential mitigation measure to reduce transportation-related noise.





Construction impacts may overlap with other projects identified in the 2020 RTP/SCS PEIR. However, the operational and construction noise impacts identified in this document are inclusive of cumulative impacts, and mitigation would achieve reductions of direct and cumulative noise and vibration impacts. However, despite the combination of Project construction with other projects, even if the projects follow the application of the proposed mitigation, the noise and vibration impacts could be cumulatively considerable, especially if other cumulative projects include nighttime construction.

As part of the Build Alternative, safety improvements are proposed at North Main Street because Metro is working with the City of Los Angeles to implement a future quiet zone for trains crossing at the North Main Street public at-grade crossing. Potential noise reductions that may occur to sensitive receptors analyzed in this report were estimated if a quiet zone were implemented. Based on the results, noise levels would change only negligibly, mainly due to the distance of the North Main Street public at-grade crossing to sensitive receptors evaluated and because trains are assumed to keep using horns at the two private at-grade crossings in the throat segment adjacent to William Mead Homes. The horns being used at North Main Street would not contribute to substantial noise reductions, although a quiet zone at Main Street would help to reduce some noise levels to sensitive receptors at William Mead Homes. Reduced horn noise at any receptor within William Mead Homes may also result in reduced sleep disturbance. The noise reductions resulting from the City of Los Angeles's implementation of a quiet zone would result in a cumulative benefit.

An additional cumulative noise benefit could also be realized from implementation of the City of Los Angeles's window replacement program for the William Mead Homes buildings located in close proximity to the rail lines. This retrofit project would include acoustical treatments of the buildings, such as sound attenuating windows. Approval of this program is ongoing. As with the quiet zone, the ultimate outcome of this effort is unknown. To be conservative, adjustments to noise levels (and the associated noise reduction benefits) were not considered as part of the quantitative Project-level noise predictions for 2026, 2031, or 2040.





11.0 Mitigation

Implementation of the following mitigation measures would reduce adverse effects.

11.1 Operational Noise Mitigation

Operational noise mitigation is typically achieved at the source (i.e., the train itself) or along the source-to-receiver path. Other mitigation strategies, such as sound insulation and replacing caulking or sealant are generally infeasible for two reasons:

- 1. At the William Mead Homes, due to the historic nature of the property, window replacement and/or modification would not be consistent with maintaining the historic appearance of the property, or
- 2. At Care First Village and Mozaic Apartments, the windows and sealant are already of sufficient quality that their replacement would not result in significant differences on interior noise levels.

FTA and FRA require that mitigation be considered to address moderate noise impacts and be required to address severe noise impacts. The following mitigation measures are proposed:

NV-1 Construct Sound Walls: Prior to reaching the 770 daily regional/intercity train movements through LAUS, Metro shall construct two permanent sound walls. The first sound wall shall be located between the William Mead Homes and the train tracks near the railroad right-of-way and shall extend to 22 feet in height and 1,144 feet long to reduce operational noise impacts at William Mead Homes. The second sound wall shall be located between the Care First Village and the train tracks near the railroad right-of-way and shall extend to 13-feet in height and 347 feet long to reduce operational noise impacts at Care First Village. The sound walls shall be constructed of materials that achieve similar reductions or insertion loss at impacted receptors and shall have a surface density of at least 4 pounds per square foot. Metro may construct the sound walls prior reaching 770 train movements through LAUS to reduce construction-related noise impacts or operational noise impacts from increased train movements that may occur as early as 2026.

A sound wall's effectiveness is a function of the path length difference between the noise source (trains), receiver (William Mead Homes and Care First Village residents), and the wall. The projected sound levels at the receiver decrease in response to the placement of a sound wall, which increases the path length difference. Figure 11-1 through Figure 11-4 depict the noise contours after implementation of Mitigation Measure NV-1 and the approximate placement of the sound walls at William Mead Homes and Care First Village, respectively. The exact dimensions of the wall would be identified during final design.











Figure 11-1. Noise Impact Areas at William Mead Homes – Build Alternative (2031 Condition with Mitigation)









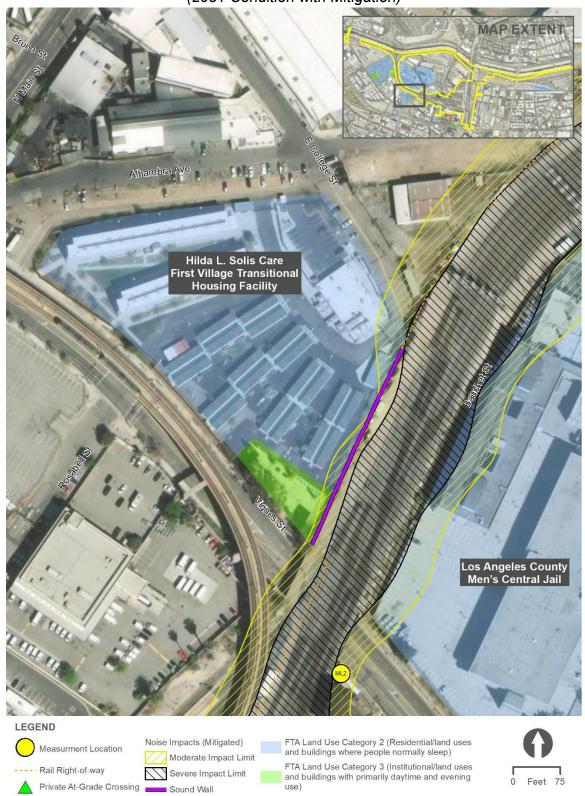


Figure 11-2. Noise Impact Areas at Care First Village – Build Alternative (2031 Condition with Mitigation)

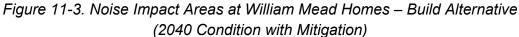


















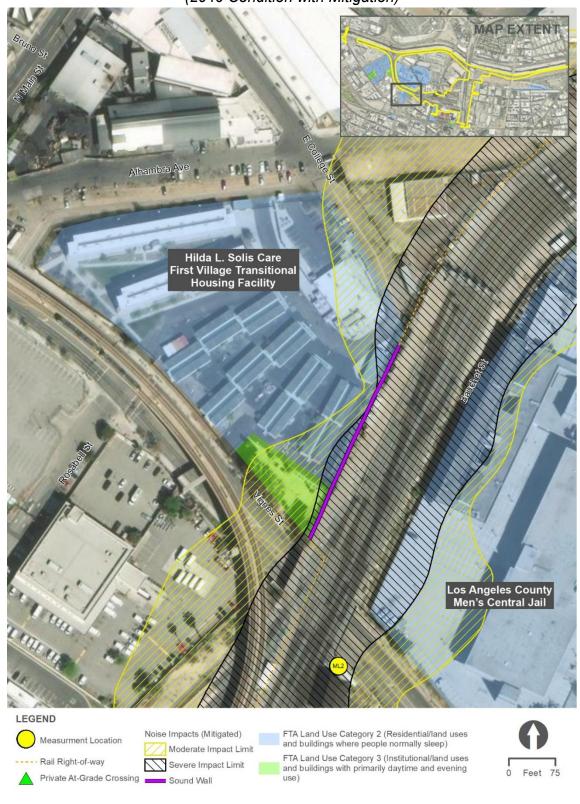


Figure 11-4. Noise Impact Areas at the Care First Village – Build Alternative (2040 Condition with Mitigation)









11.2 Construction Noise and Vibration Mitigation

General Project construction noise and construction of the sound wall associated with NV-1 (described in Section 11.1) would exceed the FTA's construction noise guidelines at receptors nearest to the proposed alignment(s), including William Mead Homes, the Care First Village, and the Mozaic Apartments. The following mitigation is proposed to reduce construction-related noise impacts:

- **NV-2** Employ Noise- and Vibration-Reducing Measures during Construction: The construction contractor shall employ measures to minimize and reduce construction noise and vibration. Through weekly and monthly meetings with Metro and the contractor, the means and methods to comply with the overall contract specifications and applicable mitigation measures shall be discussed with Metro and applicable parties prior to implementation. Noise and vibration reduction measures to be implemented include, but are not limited to, the following:
 - Design considerations and Project layout:
 - o Construct temporary noise walls, such as temporary walls or piles of excavated material, between construction activities and noise-sensitive receivers.
 - o Acoustic blankets or soundproof window inserts along facades of sensitive buildings as deemed necessary by the construction contractor.
 - o Reroute truck traffic away from residential streets, if possible, and select streets with fewest residences if no alternatives are available.
 - o When in use, locate equipment on the construction site as far away from noise-sensitive sites as possible.
 - o Construct walled enclosures around especially loud activities or clusters of loud equipment (e.g., shields can be used around pavement breakers and loaded vinyl curtains can be draped under elevated structures).
 - Sequence of operations:
 - o Restrict pile driving to daytime periods.
 - o Combine loud operations to occur in the same time period.
 - The total noise level produced would not be substantially greater than the level produced if the operations were performed separately.
 - o Avoid nighttime activities to the maximum extent feasible.
 - Sensitivity to noise increases during the nighttime hours in residential neighborhoods.
 - Alternative construction methods:
 - o Avoid use of an impact pile driver in noise and/or vibration-sensitive areas, where possible.





- Drilled piles or the use of a sonic or vibratory pile driver are quieter alternatives where the geological conditions permit their use.
- o Use specially quieted equipment, such as quieted and enclosed air compressors and properly working mufflers on all engines.
- o Select quieter demolition methods, where possible (e.g., sawing bridge decks into sections that can be loaded onto trucks results in lower cumulative noise levels than impact demolition by pavement breakers).
- o Use vibratory rollers in static mode (vibrating motor turned down or off) when operating in close proximity to sensitive buildings.

In an effort to keep construction noise levels below FTA's construction noise and vibration criteria, Metro shall monitor noise and vibration during the loudest and most vibration intensive types of construction activities. Continuous construction noise and vibration monitoring shall be conducted at the first row of residences at William Mead Homes, the Care First Village, the Metro Gateway Childhood Development Center, and Mozaic Apartments, within approximately 300 feet of construction activities. Monitors shall be deployed closest to the construction activity because demonstration of compliance with the construction thresholds at the nearest locations guarantees compliance farther away. If FTA's construction noise or vibration criteria are exceeded, the contractor shall be alerted and directed by Metro to incorporate additional noise and vibration reduction methods (examples above).

NV-3 Prepare a Community Notification Plan for Project Construction: To proactively address community concerns related to construction noise and vibration, prior to construction, Metro and/or the construction contractor shall prepare and maintain a community notification plan. Components of the plan shall include initial information packets prepared and mailed to all residences within a 500-foot radius of Project construction. Updates to the plan shall be prepared as necessary to indicate changes to the construction schedule or other processes. Metro shall identify a Project liaison to be available to respond to questions and complaints from the community or other interested groups.

11.3 Effects after Mitigation

11.3.1 Operation

Construction of sound walls would mitigate all severe operational noise impacts at William Mead Homes and Care First Village in 2031 and 2040 by blocking the line of sight from the receptors to the noise source (e.g., locomotives and railcars). Moderate impacts would also be reduced in the 2026 condition if the sound wall is constructed. Operational noise levels would be reduced by up to 12 dB at impacted locations. Table 11-1 summarizes the impacts before and after mitigation is applied.





Table 11.3-1. Op	erational N	oise Levels – B	uild Alterna	tive (2031	Condition)			
				Impac	ts without N	litigation	Impa	acts with Mit	igation
Noise-sensitive Area Descriptionª	Land Use Category	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts
William Mead	2	415	69	55–75	24	16	55-67	0	24
Homes	3	2	66	62–71	1	0	62-64	0	0
Metro Senior Housing	2	123	60	55	0	0	55	0	0
Los Angeles County Men's Central Jail	2	4,000ª	73	59	0	0	59	0	0
Twin Towers Correctional Facility	2	9,500ª	73	55	0	0	55	0	0
Mozaic Apartments East Building	2	176	67	49–63	0	3	49-63	0	3
Mozaic Apartments West Building	2	96	67	47–52	0	0	47-52	0	0
La Petite Academy (First 5 LA Headquarters)	3	1	64	50	0	0	50	0	0
One Santa Fe Apartments/Studios	2	438	71	44–59	0	0	44-59	0	0
Coro First Village	2	232	73	52–72	10	15	52-65	0	5
Care First Village	3	1	71	65	0	0	61	0	0





Table 11.3-1. Op	erational N	oise Levels – B	uild Alterna	tive (2031	Condition)				
				Impac	ts without N	litigation	Impacts with Mitigation			
Noise-sensitive Area Descriptionª	Land Use Category	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts	
Metro Gateway Childhood Development Center	3	1	64	51	0	0	51	0	0	
Total	2	14,980ª	60–73	44–75	34	34	44-67	0	32	
	3	4	64–71	50–71	1	0	50-64	0	0	

Source: Link US Noise and Vibration Study (Appendix H of this EIS/SEIR) Notes:

^a Approximately 4,000 inmates are housed at the Los Angeles County Men's Central Jail, and 9,500 inmates are housed at the Twin Towers Correctional Facilities. Neither facility provides outdoor use areas for prisoners; therefore, only interior noise levels are of concern. The prisons are built out of concrete, and have thick windows to keep prisoners inside; therefore, interior sound levels are estimated to be at least 20 dBA lower than those calculated at the exterior of each facility.
 dBA=A-weighted decibel; L_{dn}=day-night average sound level; L_{eq}=equivalent noise level





Table 11.3-2. Op	erational N	oise Levels – B	uild Alterna	tive (2040	Condition)			
				Impac	ts without N	litigation	Impa	acts with Mit	igation
Noise-sensitive Area Descriptionª	Land Use Category	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts
William Mead	2	415	69	51–75	24	16	50-67	0	24
Homes	3	2	66	55–71	1	0	55-63	0	0
Metro Senior Housing	2	123	60	51	0	0	51	0	0
Los Angeles County Men's Central Jail	2	4,000ª	73	59	0	0	59	0	0
Twin Towers Correctional Facility	2	9,500ª	73	55	0	0	55	0	0
Mozaic Apartments East Building	2	176	67	49–64	0	9	49-64	0	9
Mozaic Apartments West Building	2	96	67	46–53	0	0	46-53	0	0
La Petite Academy (First 5 LA Headquarters)	3	1	64	50	0	0	50	0	0
One Santa Fe Apartments/Studios	2	438	71	43–59	0	0	43-59	0	0
Coro Eirot Villago	2	232	73	51–72	10	0	51-64	0	0
Care First Village	3	1	71	65	0	0	61	0	0





Table 11.3-2. Op	erational N	oise Levels – B	Build Alternative (2040 Condition)							
				Impac	ts without N	litigation	Impacts with Mitigation			
Noise-sensitive Area Descriptionª	Land Use Category	Number of Dwelling Units (Category 2) or Sensitive Uses (Category 3)	Existing Noise Exposure (dBA)	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts	Range of Sound Levels (dBA)	Number of Severe Impacts	Number of Moderate Impacts	
Metro Gateway Childhood Development Center	3	1	64	52	0	0	52	0	0	
Total	2	14,980ª	60–73	43–74	34	25	43-67	0	33	
, otai	3	4	64–71	50–71	1	0	50-63	0	0	

Source: Link US Noise and Vibration Study (Appendix H of this EIS/SEIR) Notes:

^a Approximately 4,000 inmates are housed at the Los Angeles County Men's Central Jail, and 9,500 inmates are housed at the Twin Towers Correctional Facilities. Neither facility provides outdoor use areas for prisoners; therefore, only interior noise levels are of concern. The prisons are built out of concrete, and have thick windows to keep prisoners inside; therefore, interior sound levels are estimated to be at least 20 dBA lower than those calculated at the exterior of each facility.
 dBA=A-weighted decibel; L_{dn}=day-night average sound level; L_{eq}=equivalent noise level





11.3.2 Construction

Implementation of Mitigation Measures NV-1 and NV-2 (described in Section 11.1 and 11.2, respectively) would reduce impacts on sensitive receptors associated with temporary, short-term increased equipment noise, groundborne noise, and vibration from construction activities. Mitigation Measure NV-3 (described in Section 11.2) would reduce the annoyance of noise and vibration impacts during the construction phase.

Although the mitigation measures reduce noise generated during construction, noise levels would remain above 80 dBA L_{eq} (within 100 feet) during daytime hours throughout much of Project study area and would result in the most impact within Segment 2, where the Mozaic Apartments occur.

Additionally, nighttime construction activities in close proximity to William Mead Homes, the Care First Village, and the Mozaic Apartments could exceed 70 dBA L_{eq} at distances of up to 300 feet, which would exceed FTA's 8-hour nighttime noise standard. Based on these considerations, impacts related to construction noise would remain adverse.







12.0 References

California High-Speed Rail Authority (CHSRA). 2014. Environmental Methodology Guidelines.

- Federal Highway Administration. 2011. Noise: Analysis and Abatement Guidance. <u>https://www.fhwa.dot.gov/Environment/noise/regulations and guidance/analysis and abatement guidance/polguide02.cfm.</u>
- Federal Railroad Administration (FRA). 2012. *High-Speed Ground Transportation Noise and Vibration Impact Assessment*. <u>https://www.fra.dot.gov/Elib/Document/2680.</u>
- Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. <u>https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/</u> <u>transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.</u>
- International Organization for Standardization. 1996. *Acoustics Attenuation of Sound during Propagation Outdoors.* ISO 9613-2.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2015. *Connect US Action Plan*. <u>http://media.metro.net/projects_studies/union_station/images/LAUSMP</u> <u>Action_Plan_Final_100515.pdf.</u>
- ——— 2018. LA County Grade Crossing and Rail Corridor Study.
- ——— 2024a. *Link US Traffic Impact Assessment*. Prepared by HDR Engineering, Inc.
- ——— 2024b. *Link US Rail Planning Technical Memorandum*. Prepared by HDR Engineering, Inc.
- Southern California Association of Governments (SCAG). 2008. *Final 2008 Regional Comprehensive Plan*.
- ——— 2023. Federal Transportation Improvement Program.
- ———— 2020. 2020 Regional Transportation Plan/Sustainable Communities Strategy. https://scag.ca.gov/read-plan-adopted-final-connect-socal-2020.
- 2011. National Resources Conservation Service, State Soil Geographic database for California. <u>https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/partnership/</u> <u>ncss/?cid=nrcs142p2_053521.</u>
- U.S. Environmental Protection Agency. 1978. Protective Noise Levels, Condensed Version of EPA Levels Document.









Appendix A: Federal Transit Administration Acoustic Modeling Input Data









LAUS_12	Ra	ail track: Direction:		Section: 1	Km:	: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		0	16	203	-	51.2	43.7
	-		0	3		1	16	151	-	56.7	52.7
Track		ordinates of track axis	_	Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	•	Emissi	1
km				[dB]		[dl	3]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-		-		-	-
0+457	386093.644	3768905.678	93.38	-		-		-		-	-
LAUS_12		ail track: Direction:		Section: 2		: 0+000		L			
	Train	type			of trains		Speed	Length per			on level
				day	nigl	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	3		1	16	151	-	56.8	52.7
Track	Coo	ordinates of track axis	0	Track		0 Cur	16	203 Multiple	-	<u>51.2</u>	43.7 ected
Station	x	Y	z			radi		reflections			on level
km	^	r	2	type					•		1
0+000	386177.817	3769354.950	91.92	[dB]		[dl	-	[dB]		day	night
0+000 0+457	386104.970	3768904.234	91.92	-		-		-		-	-
LAUS_12		ail track: Direction:	00.02	Section: 3	Km:	: 0+000					1
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	3		1	16	151	-	56.7	52.9
			0	1		0	16	203	-	51.2	43.7
Track		ordinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections		Emissi	1
km				[dB]		[dl	3]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+483	386072.904	3768910.668	93.58	-		-		-	l	-	-

1/9/2020

LAUS_12	R	ail track: Direction:		Section: 4	Km	n: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		1	16	203	-	51.2	53.8
			0	3		1	16	151	-	56.8	52.7
Track	1	ordinates of track axis		Track		Cu	-	Multiple			ected
Station	Х	Y	Z	type		rad		reflections	;	Emissi	
km				[dB]		[dl	B]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+483	386062.371	3768915.046	93.73	-			·	-		-	-
LAUS12	R	ail track: Direction:		Section: 5	Km	n: 0+000		1			
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		1	16	203	-	51.2	53.7
			0	3		1	16	151	-	56.8	52.7
Track	1	ordinates of track axis		Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections	;		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386056.081	3768911.282	93.66	-		-		-		-	-
0+398	386134.905	3769300.687	91.92	-		-	·	-		-	-
LAUS_12	R	ail track: Direction:		Section: 6		n: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		1	16	203	-	51.2	53.7
			0	3		1	16	151	-	56.8	52.7
Track		ordinates of track axis		Track		Cu	-	Multiple		Corre	
Station	X	Y	Z	type		rad		reflections		Emissi	
km				[dB]		[dl	B]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+481	386077.284	3768910.870	89.57	-		-	·	-		-	-

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LAUS_12	Ra	il track: Direction:		Section: 7	Km:	: 0+000					
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	ght	·	train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		0	16	203	-	51.2	43.7
			0	3		1	16	151	-	56.8	52.7
Track	1	rdinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	6	Emissi	on level
km				[dB]		[dl	3]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+483	386088.708	3768906.239	89.41	-		-		-		-	-
Throat5	Ra	il track: Direction:		Section: 8	Km:	: 0+000		1			
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	2		0	32	203	-	52.3	45.0
			0	0		1	32	151	-	-	50.7
Track	1	rdinates of track axis		Track		Cur		Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[dl	3]	[dB]		day	night
0+000	386218.875	3769479.511	89.92	-		-		-		-	-
0+427	386528.833	3769712.436	89.92	-		-		-		-	-
Throat5		ail track: Direction:		Section: 9		: 0+000		1			
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	jht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	2		0	32	203	-	52.3	45.0
			0	0		1	32	151	-	-	50.7
Track		rdinates of track axis	-	Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	6		on level
km				[dB]		[dl	3]	[dB]		day	night
0+000	386218.718	3769479.515	89.92	-		-		-		-	-
0+094	386178.905	3769394.567	91.92	-		-	I	-		-	-

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Throat5		ail track: Direction:		Section: 10	Km: 0+000	-				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0 0	2 0	0 1	32 32	203 151	-	52.3 -	45.0 50.7
Track	Co	ordinates of track axis		Track	Cı	urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	5		on level
km				[dB]	[0	dB]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-	-		-	-
0+532	386527.929	3769722.157	89.92	-	1	-	-		-	-
Throat5		ail track: Direction:		Section: 11	Km: 0+000		1	-		
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
					-	km/h	m		dB(A)	dB(A)
			0	2 0	0 1	32 32	203 151	-	52.3	45.0 50.7
Track	Co	ordinates of track axis	0	Track		urve	Multiple		Corr	ected
Station	X	Y	Z	type		dius	reflections	\$		on level
km			_	[dB]		dB]	[dB]	-	day	night
0+000	386174.793	3769396.361	89.92	-		-	-		-	-
0+526	386528.159	3769717.272	89.92	-		-	-		-	-
Loop1	R	ail track: Direction:		Section: 12	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
	-		0	9	1	32	203	-	59.3	51.9
Track		ordinates of track axis	_	Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	6		on level
km	000000 744	0700000 405	04.45	[dB]		dB]	[dB]		day	night
0+000 0+754	386626.714 386721.490	3768836.135 3769547.532	84.15 89.92	-		-	-		-	-
	•	·				·				
i										
										1/9/2020

NE_3trk	Ra	ail track: Direction:		Section: 13	Kn	m: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	0		2	32	151	-	-	54.7
Treat	0	will a state of the state state	0	3		0	32	203	-	54.5	47.1
Track Station	1	rdinates of track axis	7	Track		Cu		Multiple			ected on level
	X	Y	Z	type		rad [d		reflections [dB]			i i i
km 0+000	386528.833	3769712.436	89.92	[dB]		Įu	DJ	Įubj		day	night
0+000	386635.696	3769712.430	91.31	-		-		-		-	_
AmtrakEast and SE	· · · · · · · · · · · · · · · · · · ·	ail track: Direction:		Section: 14	Kn	m: 0+000	, i i i i i i i i i i i i i i i i i i i				
	Train				of trains	1	Speed	Length per		Emissi	on level
	. ruin i			day	1	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	Coc	ordinates of track axis		Track	· [Cu	rve	Multiple			ected
Station	X	Y	Z	type		rad	lius	reflections		Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386603.806	3769725.686	89.92	-		-	-	-		-	-
0+309	386912.028	3769750.728	91.91	-		-	-	-		-	-
Riverside		ail track: Direction:		Section: 15		m: 0+000		1			
	Train	type			of trains		Speed	Length per			on level
				day	ni	night		train	Max	day	night
-					<u> </u>		km/h	m		dB(A)	dB(A)
Track		rdinates of track axis	7	Track		Cu	-	Multiple			ected on level
Station km	X	Y	Z	type [dB]		rad [d	lius	reflections [dB]			1
0+000	386823.638	3769577.065	89.26	[ub] -		Įa	-	[UD] -		day	night
0+000	386635.696	3769718.031	91.31	-		-	.	-		-	_
North		ail track: Direction:		Section: 16	Kn	m: 0+000					
	Train	type			of trains		Speed	Length per		Emissi	on level
		, , , , , , , , , , , , , , , , , , ,		day	ni	ight	•	train	Max	day	night
				,		°	km/h	m		dB(A)	dB(A)
			0	0		2	32	151	-	-	54.7
Track	1	rdinates of track axis		Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections			on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386592.696	3769724.249	89.92	-		-		-		-	-
0+595	386894.000	3770187.092	91.44	-	I	-	-	-		-	-

South5_noHSR		Rail track: Direction:		Section: 17		(m: 0+000					
	Train	type		Number		-	Speed	Length per			on level
				day		night		train	Max	day	night
				10		-	km/h	m		dB(A)	dB(A)
			0	13 48		8 6	32 32	203 151	-	60.9 66.3	61.0 59.5
Track	Со	ordinates of track axis		Track		Cu		Multiple			ected
Station	Х	Y	Z	type		rad	ius	reflections		Emissi	on level
km				[dB]		[dl	3]	[dB]		day	night
0+000	386460.712	3767860.643	79.58	-		-		-		-	-
0+290	386417.138	3768147.017	80.77	-		-		-	_	-	-
oop2_Horn		Rail track: Direction:		Section: 18		(m: 0+000		1			
	Train	type		Number			Speed	Length per			on level
				day		night		train	Max	day	night
			0	5		1	<u>km/h</u> 32	m 203	-	dB(A) 56.3	dB(A) 48.9
Track	Co	ordinates of track axis		Track		Cui		Multiple	-		ected
Station	X	Y	Z	type		rad		reflections			on level
km				[dB]		[dl		[dB]		day	night
0+000	386630.738	3769696.557	90.55	-		-	-	-		-	-
0+037	386663.231	3769678.137	90.50	-		-		-		-	-
South5_noHSR		Rail track: Direction:		Section: 19		(m: 0+000		-			
	Train	type		Number	1		Speed	Length per			on level
				day		night		train	Max	day	night
				10		0	<u>km/h</u> 32	m 203		dB(A) 60.9	dB(A) 61.0
			0	13 48		8 6	32 32	151	-	66.3	59.5
Track	Со	ordinates of track axis		Track		Cui	_	Multiple			ected
Station	Х	Y	Z	type		rad	ius	reflections		Emissi	on level
				[dB]		[dl	3]	[dB]		day	night
km		· · · · · · · · · · · · · · · · · · ·						-		-	_
km 0+000 0+177	386456.132 386425.543	3767859.838 3768034.133	79.84 80.77	-		-		_			_

South5_noHSR	Ra	ail track: Direction:		Section: 20	K	(m: 0+000					
	Train t	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	r	night	·	train	Max	day	night
						U	km/h	m		dB(A)	dB(A)
			0	13		8	32	203	-	60.9	61.0
			0	48		6	32	151	-	66.3	59.5
Track	1	ordinates of track axis		Track		Cu	rve	Multiple		Corre	ected
Station	X	Y	Z	type		rad		reflections	;	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386425.610	3768034.139	80.77	-		-		-		-	-
0+116	386412.591	3768149.464	80.77	-		-	·	-		-	-
North6	Ra	ail track: Direction:		Section: 21	K	(m: 0+000					
	Train t	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	13		6	16	203	-	63.6	62.4
			0	48	<u> </u>	8	16	151	-	69.1	63.5
Track	1	ordinates of track axis		Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections	;		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386178.905	3769394.567	91.92	-		-	•	-		-	-
0+104	386134.905	3769300.687	91.92	-			·	-		<u> </u>	-
North6		ail track: Direction:		Section: 22		(m: 0+000		1			
	Train t	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	2		0	16	203	-	55.0	47.7
			0	0	L	1	16	151	-	-	53.5
Track		ordinates of track axis	7	Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections			on level
km				[dB]		[d		[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-	·	-		-	-
0+152	386110.318	3769258.991	91.92	-	I	-	·	-		-	-

Throat5	R	ail track: Direction:		Section: 23	Km: (0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	2		0	32	203	-	52.3	45.0
			0	0		1	32	151	-	-	50.7
Track	1	ordinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		radi		reflections	;	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386207.420	3769444.399	89.92	-		-		-		-	-
0+420	386491.280	3769703.788	89.92	-		-		-		-	-
Throat5	R	ail track: Direction:		Section: 24	Km: (0+000		1	-		
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	2		0	32	203	-	52.3	45.0
			0	0		1	32	151	-		50.7
Track	1	ordinates of track axis		Track		Cur		Multiple			ected
Station	X	Y	Z	type		radi		reflections	;		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386207.338	3769444.437	89.92	-		-		-		-	-
0+070	386178.406	3769381.047	91.92	-		-		-		-	-
LAUS_12	R	ail track: Direction:		Section: 25		0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		0	16	203	-	51.2	43.8
	-		0	3		1	16	151	-	56.7	52.7
Track		ordinates of track axis		Track		Cur	-	Multiple		Corre	
Station	X	Y	Z	type		radi		reflections		Emissi	
km				[dB]		[dE	3]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-		-		-	-
0+075	386203.614	3769425.526	89.92	-		-		-	l	-	-

LAUS_12	Ra	ail track: Direction:		Section: 26	Km:	: 0+000					
	Train t	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigł	jht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		0	16	203	-	51.2	43.7
			0	3		1	16	151	-	56.8	52.7
Track	1	ordinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		radi		reflections	5	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-		-		-	-
0+532	386109.172	3768903.494	93.32	-		-		-		-	-
LAUS_12		ail track: Direction:		Section: 27	Km:	: 0+000		1			
	Train t	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigł	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		1	16	203	-	51.2	52.9
			0	3		0	16	151	-	56.8	43.7
Track	1	ordinates of track axis		Track		Cur		Multiple			ected
Station	X	Y	Z	type		radi		reflections	5		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-		-		-	-
0+532	386121.048	3768901.251	93.10	-		-		-		-	-
LAUS12_wHSR4	Ra	ail track: Direction:		Section: 28		: 0+000					
	Train t	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigł	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1		0	16	203	-	51.2	43.9
	-		0	3		1	16	151	-	56.8	52.8
Track		ordinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		radi		reflections	6	Emissi	1
km				[dB]		[dE	3]	[dB]		day	night
0+000	386044.035	3768914.069	93.78	-		-		-		-	-
0+399	386134.905	3769300.687	91.92	-		-		-		-	-

LAUS12_wHSR4	Ra	ail track: Direction:		Section: 29	Km: 0-	+000					
	Train t	VDe		Number	of trains		Speed	Length per		Emissi	on level
)		day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	1	0		16	203	-	51.2	43.7
			0	3	1		16	151	-	56.8	52.7
Track	1	rdinates of track axis	_	Track		Curv		Multiple			ected
Station	X	Y	Z	type		radi		reflections	;		on level
km	000000.054	0700040 400	00.75	[dB]		[dB		[dB]		day	night
0+000 0+354	386039.054 386110.318	3768912.182 3769258.991	93.75 91.92	-		-		-		-	-
LAUS12_wHSR4		ill track: Direction:	91.92	Section: 30	Km: 0-	+000	1	_			-
	Train t				of trains		Speed	Length per		Emissi	on level
	Traint	ypc		day	night		Opeeu	train	Max	day	night
				ddy	l		km/h	m	Max	dB(A)	dB(A)
			0	1	0)	16	203	-	51.2	43.7
			0	3	1		16	151	-	56.8	52.7
Track	1	rdinates of track axis		Track		Curv		Multiple			ected
Station	X	Y	Z	type		radi		reflections	;		on level
km				[dB]		[dB	3]	[dB]		day	night
0+000 0+358	386110.318 386026.567	3769258.991 3768912.709	91.92 93.81	-		-		-		-	-
GoldNB Reloc	· · · · · · · · · · · · · · · · · · ·	ail track: Direction:	93.01	Section: 31	Km: 0-			-		-	-
GOIDIND_REIDC	Train t				of trains	+000	Speed	Length per		Emioni	on level
	Indirit	ype		day	night		Speed	train	Max	day	night
				uay	Ingrit		km/h	m	IVIAX	dB(A)	dB(A)
Track	Coo	rdinates of track axis		Track	<u> </u>	Curv		Multiple			ected
Station	X I	Y	Z	type		radi	-	reflections			on level
km			_	[dB]		[dB		[dB]		day	night
0+000	386006.651	3768862.937	91.29	-			-	-		-	-
0+853	385999.210	3769650.932	88.37	-		-		-		-	-
GoldSB_Reloc	Ra	il track: Direction:		Section: 32	Km: 0-	+000					
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	1	rdinates of track axis		Track		Curv		Multiple			ected
Station	X	Y	Z	type		radi		reflections	;		on level
km				[dB]		[dB	-	[dB]		day	night
0+000 0+848	386001.861 385995.788	3768863.845 3769646.440	89.92 88.31	-		-		-		-	-
0+048	303993./88	3109040.440	00.31	-		-		-		-	-

Loop2_Horn	R	ail track: Direction:		Section: 33	Km: 0+0	00				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
					-	km/h	m		dB(A)	dB(A)
			0	5	1	32	2 203	-	56.3	48.9
Track	Co	ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflection	S	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386731.600	3769516.995	89.92	-		-	-		-	-
0+053	386722.218	3769569.313	89.92	-		-	-		-	-
NE_3trk	R	ail track: Direction:		Section: 34	Km: 0+0	00			•	
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	0	2	32		- 1	-	54.7
			0	3	0	32		-	54.5	47.1
Track	1	ordinates of track axis	_	Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflection	S		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386527.929	3769722.157	89.92	-		-	-		-	-
0+080	386607.050	3769730.723	89.92	-		-	-		-	-
NE_3trk		ail track: Direction:		Section: 35	Km: 0+0					
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
			-	-	-	km/h	m		dB(A)	dB(A)
			0	0 3	2 0	32		-	- 54.5	54.7 47.1
Track	Co	ordinates of track axis	0	Track	0	Curve	Z 203 Multiple			ected
Station	x		z	type		radius	reflection			on level
km	Λ		2	[dB]		[dB]	[dB]	5	day	night
0+000	386528.159	3769717.272	89.92	[0D]		- -	[0D]		uay -	
0+065	386592.696	3769724.249	89.92	-		-	-			-
	300002.000		00.02				I		'	1

North	R	ail track: Direction:		Section: 36	k	(m: 0+000	-			-	
	Train	type		Number	of train	IS	Speed	Length per		Emissio	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	0		2	32	151	-	-	54.7
Track	Co	ordinates of track axis		Track		Cu	irve	Multiple		Corre	ected
Station	Х	Y	Z	type		rac	lius	reflections	6	Emissio	on level
km				[dB]		[d	IB]	[dB]		day	night
0+000	386607.050	3769730.723	89.92	-			-	-		-	-
0+573	386889.616	3770188.510	91.44	-			-	-		-	-
Throat5	R	ail track: Direction:		Section: 37	k	Km: 0+000					
	Train	type		Number	of train	IS	Speed	Length per		Emissio	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	0		1	32	151	yes	-	50.7
			0	2		0	32	203	<u> </u>	52.3	45.0
Track	1	ordinates of track axis		Track			irve	Multiple		Corre	
Station	Х	Y	Z	type			lius	reflections	6	Emissio	on level
km				[dB]		[d	IB]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-			-	-		-	-
Throat5	R	ail track: Direction:		Section: 38	k	Km: 0+221					
	Train	type		Number	of train	IS	Speed	Length per		Emissio	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	0		1	32	151	-	-	50.7
			0	2		0	32	203	L -	52.3	45.0
Track	1	ordinates of track axis		Track			irve	Multiple		Corre	
Station	Х	Y	Z	type			lius	reflections	3	Emissio	1
km				[dB]		[d	IB]	[dB]		day	night
0+221	386300.889	3769623.792	89.92	-			-	-		-	-
0+436	386493.600	3769699.206	89.92	-			-	-	l	-	-

Loop2 Horn	R	ail track: Direction:		Section: 39	Km: 0+030					
	Train			Number		Speed	Length per		Emiss	ion level
		.)		day	night		train	Мах	day	night
					5	km/h	m		dB(A)	dB(A)
			0	5	1	32	203	-	56.3	48.9
Track	Co	ordinates of track axis		Track	Cu	lrve	Multiple		Cori	rected
Station	Х	Y	Z	type	ra	dius	reflections	;	Emiss	ion level
km				[dB]	[0	JB]	[dB]		day	night
0+030	386663.160	3769662.289	90.02	-		-	-		-	-
0+074	386625.852	3769686.136	90.11	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 40	Km: 0+000		1			
	Train	type		Number		Speed	Length per			ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Treat	-		0	2	0	32	203	yes	69.7	62.0
Track	1	ordinates of track axis	-	Track		urve	Multiple			rected
Station	Х	Y	Z	type		dius	reflections			ion level
km	200005.052	2700000 420	00.44	[dB]		JB]	[dB]		day	night
0+000 0+098	386625.852 386530.357	3769686.136 3769701.484	90.11 89.92	-		-	-		-	-
01000	000000.001									
ThroatExit_S_W of	f River w Horn R	ail track: Direction:	00.02	Section: 41	Km: 0+000					
ThroatExit_S_W of	f River w Horn R Train	ail track: Direction:		Section: 41 Number		Speed	Length per		Emiss	ion level
ThroatExit_S_W of		ail track: Direction:	00.02			Speed	Length per train	Max	Emiss day	ion level
ThroatExit_S_W of		ail track: Direction:	00.02	Number	of trains	Speed km/h	train m	Max	day dB(A)	night dB(A)
ThroatExit_S_W of	Train	ail track: Direction: type	0	Number day 3	of trains		train m 203	Max yes	day dB(A) 70.7	night dB(A) 63.7
ThroatExit_S_W of	Train	ail track: Direction: type ordinates of track axis	0	Number day 3 Track	of trains night 0 Ct	km/h 32 urve	train m		day dB(A) 70.7 Corr	night dB(A) 63.7 rected
	Train	ail track: Direction: type		Number day 3 Track type	of trains night 0 Cu rau	km/h 32 urve dius	train m 203 Multiple reflections	yes	day dB(A) 70.7 Corr	night dB(A) 63.7
Track Station km	Train Co X	ail track: Direction: type ordinates of track axis Y	0 Z	Number day 3 Track type [dB]	of trains night 0 Cu rau	km/h 32 urve	train m 203 Multiple	yes	day dB(A) 70.7 Corr	night dB(A) 63.7 rected
Track Station km 0+000	Train Co X 386663.431	ail track: Direction: type ordinates of track axis Y 3769678.014	0 Z 90.52	Number day 3 Track type [dB]	of trains night 0 Cu rau [0	km/h 32 urve dius 3B]	train m 203 Multiple reflections [dB]	yes	day dB(A) 70.7 Corr Emiss day	night dB(A) 63.7 rected ion level night -
Track Station km 0+000 0+127	Co X 386663.431 386722.216	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318	0 Z	Number day 3 Track type [dB]	of trains night 0 Cu rau [0	km/h 32 urve dius	train m 203 Multiple reflections	yes	day dB(A) 70.7 Corr Emiss	night dB(A) 63.7 rected ion level
Track Station km 0+000	Train Co X 386663.431 386722.216 f River w Horn R	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	0 Z 90.52	Number day 3 Track type [dB] - Section: 42	of trains night 0 Cu rau [0 Km: 0+000	km/h 32 urve dius JB] -	train m 203 Multiple reflections [dB]	yes	day dB(A) 70.7 Corr Emiss day - -	night dB(A) 63.7 rected ion level night - -
Track Station km 0+000 0+127	Co X 386663.431 386722.216	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	0 Z 90.52	Number day 3 Track type [dB] Section: 42 Number	of trains night 0 Cu rau [0 Km: 0+000 of trains	km/h 32 urve dius 3B]	train m 203 Multiple reflections [dB] - - Length per	yes	day dB(A) 70.7 Corr Emiss day - - Emiss	night dB(A) 63.7 rected ion level - -
Track Station km 0+000 0+127	Train Co X 386663.431 386722.216 f River w Horn R	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	0 Z 90.52	Number day 3 Track type [dB] - Section: 42	of trains night 0 Cu rau [0 Km: 0+000	km/h 32 urve dius 3B] - - - Speed	train m 203 Multiple reflections [dB] - - -	yes	day dB(A) 70.7 Corr Emiss day - - Emiss day	night dB(A) 63.7 rected ion level night - -
Track Station km 0+000 0+127	Train Co X 386663.431 386722.216 f River w Horn R	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	0 Z 90.52 89.92	Number day 3 Track type [dB] 2 Section: 42 Number day	of trains night 0 Ct rad [d Km: 0+000 of trains night	km/h 32 urve dius 3B] - - Speed km/h	train m 203 Multiple reflections [dB] - - - Length per train m	yes	day dB(A) 70.7 Corr Emiss day - Emiss day dB(A)	night dB(A) 63.7 rected ion level - - - - - - - - - - - - - - - - - - -
Track Station km 0+000 0+127 ThroatExit_S_W of	Train Co X 386663.431 386722.216 f River w Horn R Train	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type	0 Z 90.52	Number day 3 Track type [dB] - - Section: 42 Number day 2	of trains night 0 Ct rat [0 Km: 0+000 of trains night 0	km/h 32 Jrve dius 3B - - - Speed km/h 32	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes	day dB(A) 70.7 Corr Emiss day - - Emiss day dB(A) 69.7	night dB(A) 63.7 rected ion level - - - - - - - - - - - - - - - - - - -
Track Station km 0+000 0+127 ThroatExit_S_W of Track	Train Co X 386663.431 386722.216 f River w Horn R Train Co	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type ordinates of track axis	0 Z 90.52 89.92	Number day 3 Track type [dB] - - Section: 42 Number day 2 Track	of trains night 0 Cu rau [0 Km: 0+000 of trains night 0 Cu	km/h 32 urve dius dB] - - - Speed km/h 32 urve	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 70.7 Com Emiss day - Emiss day dB(A) 69.7 Com	ion level night dB(A) 63.7 rected night - - - - - - - - - - - - - - - - - - -
Track Station km 0+000 0+127 ThroatExit_S_W of	Train Co X 386663.431 386722.216 f River w Horn R Train	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type	0 Z 90.52 89.92	Number day 3 Track type [dB] - - Section: 42 Number day 2 Track type	of trains night 0 Cu rau [0 Km: 0+000 of trains night 0 Cu rau	km/h 32 urve dius 4B] - - - Speed km/h 32 urve dius	Length per train m 203 Multiple ceflections [dB]	yes Max yes	day dB(A) 70.7 Com Emiss day - - Emiss day dB(A) 69.7 Com Emiss	night dB(A) 63.7 rected ion level night - - ion level night dB(A) 62.0 rected ion level
Track Station km 0+000 0+127 ThroatExit_S_W of Track Station km	Train Co X 386663.431 386722.216 f River w Horn R Train Co X	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type ordinates of track axis Y	0 Z 90.52 89.92 0 Z	Number day 3 Track type [dB] - - Section: 42 Number day 2 Track	of trains night 0 Cu rau [0 Km: 0+000 of trains night 0 Cu rau [0	km/h 32 urve dius dB] - - - Speed km/h 32 urve	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 70.7 Com Emiss day - Emiss day dB(A) 69.7 Com	ion level night dB(A) 63.7 rected night - - - - - - - - - - - - - - - - - - -
Track Station km 0+000 0+127 ThroatExit_S_W of Track Station	Train Co X 386663.431 386722.216 f River w Horn R Train Co	ail track: Direction: type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type ordinates of track axis	0 Z 90.52 89.92	Number day 3 Track type [dB] - - - - - - - - - - - - - - - - - - -	of trains night 0 Cu rau [0 Km: 0+000 of trains night 0 Cu rau [0	km/h 32 urve dius dB] - - - - - - - - - - - - - - - - - - -	Length per train m 203 Multiple ceflections [dB]	yes Max yes	day dB(A) 70.7 Com Emiss day - - Emiss day dB(A) 69.7 Com Emiss	night dB(A) 63.7 rected ion level night - - ion level night dB(A) 62.0 rected ion level

ThroatExit_S_W of	River w Horn R	ail track: Direction:		Section: 43	Km: 0+000					
	Train	type		Number o	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	2	0	32	203	yes	69.7	62.0
Track		ordinates of track axis		Track	Cu	irve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections			on level
km				[dB]	[0	B]	[dB]		day	night
0+000	386530.098	3769706.166	89.92	-		-	-		-	-
0+102	386630.738	3769696.557	90.55	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 44	Km: 0+000	1	1			
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	2	0	32	203	yes	69.7	62.0
Track	1	ordinates of track axis		Track		irve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections			on level
km				[dB]	[0	B]	[dB]		day	night
0+000	386491.286	3769703.728	89.92	-		-	-		-	-
0+039	386530.098	3769706.166	89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 45	Km: 0+000					
	Train	type		Number c		Speed	Length per			on level
				day	night		train	Max	day	night
			-	-		km/h	m		dB(A)	dB(A)
I	-	11 A A A A A A	0	2	0	32	203	yes	69.7	62.0
Track		ordinates of track axis	_	Track		irve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections			on level
km				[dB]		B]	[dB]		day	night
0+000 0+037	386530.357 386493.600	3769701.484 3769699.206	89.92 89.92	-		-	-		-	-
ThroatExit S W of		ail track: Direction:	09.92	Section: 46	Km: 0+000	-	-		-	-
	Train			Number o		Speed	Length per		Fmiesi	on level
	iidiii	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		day	night	opecu	train	Мах	day	night
				duy	ingit	km/h	m	Max	dB(A)	dB(A)
			0	2	0	32	203	ves	69.7	62.0
Track	Со	ordinates of track axis		Track		irve	Multiple	,		ected
Station	X	Y	Z	type		dius	reflections			on level
km				[dB]		B]	[dB]		day	night
0+000	386721.464	3769547.605	89.92	-		-	-		-	-
0+032	386715.197	3769579.095	89.92	-		-				

	f River w Horn R Train	type		Section: 47 Number	Km: 0+000	Speed	Length per		Fmice	ion level
	Train	туре		day	night	Opeed	train	Max	day	night
				uay	night	km/h	m	IVIAA	dB(A)	dB(A)
			0	2	0	32	203	ves	69.7	62.0
Track	Со	ordinates of track axis		Track		rve	Multiple	<u>,00</u>		rected
Station	x	Y	Z	type		lius	reflections	5		ion level
km			_	[dB]		B]	[dB]		day	night
0+000	386689.207	3769634.305	90.24	-		-	-		-	-
0+038	386663.062	3769662.269	90.04	-		-	-		-	-
entura, LOSSAN,	Coast Starlight 2 R	ail track: Direction:		Section: 48	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
				,	0	km/h	m		dB(A)	dB(A)
			0	0	2	32	151	yes	-	72.0
			0	3	0	32	203	-	71.5	64.2
Track	1	ordinates of track axis		Track		irve	Multiple			rected
Station	Х	Y	Z	type		lius	reflections	5		ion level
km				[dB]	-	B]	[dB]		day	night
0+000 0+333	386893.999 386973.752	3770187.096 3770507.725	90.81 -	-		-	-		-	-
entura, LOSSAN,	Coast Starlight 1 R	ail track: Direction:		Section: 49	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	0	2	32	151	yes	-	72.0
Tasala	0.		0	3	0	32	203	-	71.5	64.2
Track		ordinates of track axis	7	Track		rve	Multiple			rected
Station	Х	Y	Z	type		dius	reflections	5		ion level
km	200000 044	2770400 507	04.05	[dB]		B]	[dB]		day	night
0+000 0+331	386889.614 386966.343	3770188.507 3770506.879	91.05	-		-	-		-	-
0.001 1			·		I	I				I

ThroatExit_S_W of	River Ra	ail track: Direction:		Section: 50	Km: 0+0	00	-			
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	3	0	32	203	yes	53.7	46.7
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386625.852	3769686.136	90.11	-		-	-		-	-
0+098	386530.357	3769701.484	89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 51	Km: 0+0		1		r	
	Train	type		Number	of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
	-		0	3	0	32	203	yes	53.7	46.7
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386663.431	3769678.014	90.52	-		-	-		-	-
0+127	386722.216	3769569.318	89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 52	Km: 0+0					
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Treals	0	undinated of treats assis	0	3 Track	0	32 Curve	203	yes	53.7	46.7 ected
Track	1	ordinates of track axis	7				Multiple			
Station	X	Y	Z	type		radius	reflections	5		on level
km	200745 002	0700570.000	00.00	[dB]		[dB]	[dB]		day	night
0+000 0+061	386715.203 386689.207	3769579.068 3769634.305	89.92 90.24	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:	50.24	Section: 53	Km: 0+0					
	Train				of trains	Speed	Length per		Emissi	on level
	Tun	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		day	night	Opeou	train	Max	day	night
				uuy	ingit	km/h	m	, max	dB(A)	dB(A)
			0	3	0	32	203	ves	53.7	46.7
Track	Coc	ordinates of track axis	3	Track		Curve	Multiple	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386530.098	3769706.166	89.92	[*-]		-	-		-	-
0+102	386630.738	3769696.557	90.55	-		-				-

ThroatExit_S_W of	f River Ra	ail track: Direction:		Section: 54	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	3	0	32	203	yes	53.7	46.7
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386491.286	3769703.728	89.92	-		-	-		-	-
0+039	386530.098	3769706.166	89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 55	Km: 0+000		1			
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
L			0	3	0	32	203	yes	53.7	46.7
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386530.357	3769701.484	89.92	-		-	-		-	-
0+037	386493.600	3769699.206	89.92	- -		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 56	Km: 0+000	-				<u> </u>
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
			0	0		km/h	m		dB(A)	dB(A)
Track	Coo	ordinates of track axis	0	3 Track	0	32 Curve	203 Multiple	yes	53.7 Corr	46.7 ected
Station	x		z			radius	reflections			on level
	^	r	Z	type [dB]		[dB]		,		1
km 0+000	386721.464	3769547.605	89.92	[UD] -		[UD]	[dB]		day	night
0+000	386715.197	3769579.095	89.92 89.92	-		-	-		-	
ThroatExit S W of		ail track: Direction:	00.02	Section: 57	Km: 0+000)				1
	Train				of trains	Speed	Length per		Emissi	on level
	Tun	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		day	night	Cpood	train	Max	day	night
				aay	ingit	km/h	m	Indx	dB(A)	dB(A)
			0	3	0	32	203	ves	53.7	46.7
Track	Coc	ordinates of track axis	Ŭ	Track		Curve	Multiple	,		ected
Station	X	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386689.207	3769634.305	90.24	[*-]		-	-		-	-
0+038	386663.062	3769662.269	90.04	-		-			-	-

South2	R	ail track: Direction:		Section: 58	ł	Km: 0+000					
	Train	type		Number	of trair	าร	Speed	Length per		Emissi	on level
				day		night		train	Max	day	night
						-	km/h	m		dB(A)	dB(A)
			0	48		6	16	151	yes	69.1	62.3
	-		0	13		8	16	203	-	63.6	63.7
Track	1	ordinates of track axis		Track		Cu	-	Multiple			ected
Station	Х	Y	Z	type			lius	reflections	6		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386026.567	3768912.709	93.81	-			-	-		-	-
0+329	386204.848	3768677.695	83.88	-		·	-	-		-	-
South2		ail track: Direction:		Section: 59		Km: 0+000					
	Train	type		Number	1	-	Speed	Length per			on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	48		8	16	151	yes	69.1	63.5
Track	Co	ordinates of track axis	0	13 Track	l	<u>8</u> Cu	16	203 Multiple	-	63.6 Corre	63.7 ected
Station	x		z			rad	-	reflections			on level
km	^	T	2	type [dB]		lac [d		[dB])	day	night
0+000	386044.035	3768914.069	93.78	-		[u		[00]		- uuy	-
0+311	386206.171	3768683.692	83.93	-			_	_		-	-
South2	R	ail track: Direction:	-	Section: 60	ŀ	≺m: 0+000					
	Train	type		Number	of train	าร	Speed	Length per		Emissi	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	48		8	32	151	-	66.3	60.7
			0	13		8	32	203	-	60.9	61.0
Track		ordinates of track axis		Track		Cu	-	Multiple			ected
Station	Х	Y	Z	type		rad		reflections	6		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386425.543	3768034.133	80.77	-			-	-		-	-
0+177	386456.132	3767859.838	79.84	-	I		-	-		-	-
1											

outh2	R	ail track: Direction:		Section: 61	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	48	8	32	151	-	66.3	60.7
			0	13	8	32	203	-	60.9	61.0
Track	Coo	ordinates of track axis		Track	Cu	lrve	Multiple		Corr	ected
Station	Х	Y	Z	type	rad	dius	reflections	6	Emissi	on level
km				[dB]	[c	JB]	[dB]		day	night
0+000	386206.171	3768683.692	83.93	-		-	-		-	-
0+969	386457.662	3767878.014	79.69	-		-	-		-	-
outh4_HSR2	R	ail track: Direction:		Section: 62	Km: 0+000				-	
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(Å)	dB(A)
			0	48	8	32	151	-	66.3	60.7
			0	13	8	32	203	-	60.9	61.0
Track	Coo	ordinates of track axis		Track	Cu	irve	Multiple			ected
Station	Х	Y	Z	type	rad	dius	reflections	6	Emissi	on level
km				[dB]	[c	JB]	[dB]		day	night
0+000 0+965	386204.959 386453.503	3768679.601	83.89	-		-	-		-	-

South10_HSR4	R	ail track: Direction:		Section: 1	Kı	ím: 0+000					
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
				,		0	km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	3		1	16	203	-	57.7	53.7
Track		ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	;	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386026.567	3768912.709	93.81	-		-	-	-		-	-
0+329	386204.848	3768677.695	83.88	-			-	-		-	-
South10_HSR4	R	ail track: Direction:		Section: 2		ím: 0+000					
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
					km/h		m		dB(A)	dB(A)	
		0	18		3 16		151	yes	64.8	59.5	
-		11 A A A A A A	0	3		1	16	203	-	57.7	53.7
Track		ordinates of track axis	-	Track		Cu	-	Multiple			ected
Station	Х	Y	Z	type		rad		reflections			on level
km				[dB]		[d	-	[dB]		day	night
0+000 0+316	386039.054 386204.848	3768912.182 3768677.695	93.75 83.88	-		-		-		-	-
South10 HSR4		ail track: Direction:	03.00	Section: 3		m: 0+000	-	-		-	-
3000000_H3R4							Cread	L an ath man		Eminai	an laval
	Train	туре		Number	1	-	Speed	Length per			on level
				day	l u	night	lune /la	train	Max	day	night
			0	18		3	km/h 16	m 151	1/05	dB(A) 64.8	dB(A) 59.5
			0	18		3 1	16	203	yes	64.8 57.7	59.5 53.7
Track	Co	ordinates of track axis	0	Track	L	Cu		Multiple		-	ected
Station	X	Y	Z	type		rad	-	reflections			on level
km		·	_	[dB]		[d		[dB]		day	night
0+000	386044.035	3768914.069	93.78	-		[u	-	-		-	-
0+311	386206.171	3768683.692	83.93	-		-		-		-	-
l .	·	'									

South10_HSR4	R	ail track: Direction:		Section: 4	К	(m: 0+000					
	Train			Number			Speed	Length per		Emissi	on level
		.)[-		day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	3		1	16	203	-	57.7	53.7
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple		Corre	ected
Station	Х	Y	Z	type		rad	lius	reflections	;	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386056.081	3768911.282	93.66	-		-	-	-		-	-
0+298	386206.171	3768683.692	83.93	-				-		-	-
South10	Ra	ail track: Direction:		Section: 5	K	(m: 0+000					
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
		0	18		3 16		151	yes	64.8	59.5	
			0	3		1	16	203	-	57.7	53.7
Track	1	ordinates of track axis		Track		Cu		Multiple			ected
Station	Х	Y	Z	type		rad		reflections	;		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386062.371	3768915.046	93.73	-		-	-	-		-	-
0+289	386209.772	3768691.097	84.02	-			·	-		-	-
South10		ail track: Direction:		Section: 6		(m: 0+000					
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
	-	1	0	3	L	1	16	203	-	57.7	53.7
Track		ordinates of track axis	-	Track		Cu	-	Multiple			ected
Station	Х	Y	Z	type		rad		reflections		Emissi	
km				[dB]		[d	-	[dB]		day	night
0+000	386072.904	3768910.668	93.58	-		-		-		-	-
0+278	386209.772	3768691.097	84.02	-	I	-	-	-	l	-	-

South10	Ra	ail track: Direction:		Section: 7	Km: 0	0+000					
	Train	уре		Number	of trains		Speed	Length per		Emissio	on level
				day	night	t		train	Max	day	night
					_		km/h	m		dB(A)	dB(A)
			0	18	3	3	16	151	yes	64.8	59.5
			0	3	1	1	16	203	-	57.7	53.7
Track	1	rdinates of track axis	_	Track		Cur	-	Multiple		Corre	
Station	X	Y	Z	type		rad		reflections		Emissio	
km				[dB]		[dl	B]	[dB]		day	night
0+000	386077.284	3768910.870	89.57	-		-		-		-	-
0+272	386209.772	3768691.097	84.02			-	·	-		-	-
South10		ail track: Direction:		Section: 8	Km: 0	000+0					
	Train	ype		Number of trains			Speed	Length per		Emissio	
				day	night	t		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18	3	3	16	151	yes	64.8	59.5
Track	Coo	rdinates of track axis	0	3 Track		1 Cur	16	203 Multiple	-	57.7 Corre	53.7
Station	x		z			radi		reflections		Emissio	
km	^	ř	2	type [dB]		radi [dl		[dB]		day	
0+000	386088.708	3768906.239	89.41	[UD] -		lui		Įubj		uay	night
0+000 0+260	386210.302	3768696.653	84.06	-		-		-		-	-
South10		ail track: Direction:	0.000	Section: 9	Km: 0	0+000					
	Train	уре		Number	of trains		Speed	Length per		Emissio	on level
				day	night	t		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	-	64.8	59.5
			0	3	1	1	16	203	-	57.7	53.7
Track		rdinates of track axis		Track		Cur	-	Multiple		Corre	
Station	X	Y	Z	type		rad		reflections		Emissio	
km				[dB]		[dl	B]	[dB]		day	night
0+000	386093.644	3768905.678	93.38	-		-	.	-		-	-
0+255	386210.302	3768696.653	84.06	-		-	.	-		-	-

South10	R	ail track: Direction:		Section: 10	Kn	m: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	n	ight		train	Max	day	night
				,		Ŭ	km/h	m		dB(A)	dB(A)
			0	18		3	16	151	-	64.8	59.5
			0	3		1	16	203	-	57.7	53.7
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad	lius	reflections	;	Emissi	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386104.970	3768904.234	93.32	-		-	-	-		-	-
0+249	386210.302	3768696.653	84.06	-		-	<u> </u>	-		-	-
South4	R	ail track: Direction:		Section: 11	Kn	m: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
				45		8	32	151	-	66.0	60.7
			0	8		2	32	203	-	59.0	55.0
Track	1	ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	;		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386209.772	3768691.097	84.02	-		-	-	-		-	-
0+128	386333.643	3768659.816	83.82	-		-	.	-		-	-
South2		ail track: Direction:		Section: 12	Kn	m: 0+000			-		
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	n	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	89		16	32	151	-	69.0	63.8
			0	17		4	32	203	-	62.0	58.0
Track	1	ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections			on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386425.543	3768034.133	80.77	-		-	-	-		-	-
0+177	386456.132	3767859.838	79.84	-		-	-	-	l	-	-

South2	Ra	il track: Direction:		Section: 13	Km: 0+	+000					
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	45	8		32	151	-	66.0	60.7
			0	8	2		32	203	-	59.0	55.0
Track	1	rdinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		radi		reflections	;	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386333.643	3768659.816	83.82	-		-		-		-	-
0+709	386425.610	3768034.139	80.77	-		-		-		-	-
South2	Ra	il track: Direction:		Section: 14	Km: 0+	+000		1	-		
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
		0	45	8	8 32		151	-	66.0	60.7	
			0	8	2		32	203	-	59.0	55.0
Track	1	rdinates of track axis		Track		Cur		Multiple			ected
Station	X	Y	Z	type		radi		reflections	;		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386334.825	3768663.917	83.82	-		-		-		-	-
0+890	386460.712	3767860.643	79.58	-		-		-		-	-
South4		il track: Direction:		Section: 15	Km: 0+	+000					
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	45	8		32	151	-	66.0	60.7
	-		0	8	2		32	203	-	59.0	55.0
Track		rdinates of track axis		Track		Cur	-	Multiple		Corre	
Station	X	Y	Z	type		radi		reflections		Emissi	
km				[dB]		[dE	3]	[dB]		day	night
0+000	386210.302	3768696.653	84.06	-		-		-		-	-
0+129	386334.825	3768663.917	83.82	-	I	-		-	l	-	-

Loop1	R	ail track: Direction:		Section: 16	Km	n: 0+000					
	Train	type		Number o	of trains		Speed	Length per		Emissi	on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	Co	ordinates of track axis		Track		Cur	ve	Multiple		Corre	ected
Station	Х	Y	Z	type		rad	ius	reflections	6	Emissio	on level
km				[dB]		[dl	3]	[dB]		day	night
0+000	386334.825	3768663.917	83.82	-		-		-		-	-
0+368	386626.714	3768836.135	84.15	-		-		-		-	-
South4_HSR2		ail track: Direction:		Section: 17	Km	n: 0+000		1			
	Train	type		Number			Speed	Length per		Emissio	
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	45		8	32	151	-	66.0	60.7
Track	Co	ordinates of track axis	0	8 Track		2 Cur	32	203 Multiple	-	59.0 Corre	55.0
Station	x		Z			radi		reflections		Emissio	
km	^	1	2	type [dB]		[di		[dB]	>	day	night
0+000	386206.171	3768683.692	83.93	-		-	-	[db] -		- -	-
0+969	386457.662	3767878.014	79.69	-		-		-		-	-
South4_HSR2		ail track: Direction:		Section: 18	Km	n: 0+000	•				
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	45		8	32	151	-	66.0	60.7
Tuesda	0.0		0	8		2	32	203	-	59.0	55.0
Track Station	x	ordinates of track axis	z	Track		Cur radi		Multiple reflections		Corre Emissio	
km	^	T	2	type [dB]		[di		[dB]	>	day	night
0+000	386204.959	3768679.601	83.89	[UD] -		[UI	-	[ub]		uay	
0+000	386453.503	3767877.061	79.94	-		-		_		-	-
					1		I.			1	
1											
1											
1											

LAUS_12	Ra	il track: Direction:		Section: 19	Km	n: 0+000					
	Train t	уре		Number	of trains		Speed	Length per		Emissio	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
			0	3		0	32	203	-	55.0	-
Track		rdinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	5	Emissio	1
km				[dB]		[dl	B]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-		-		-	-
0+457	386093.644	3768905.678	93.38	-			·	-		-	-
LAUS_12	Ra	il track: Direction:		Section: 20	Km	n: 0+000					
	Train t	уре		Number	of trains		Speed	Length per		Emissio	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
			0	3		0	32	203	-	55.0	-
Track	1	rdinates of track axis		Track		Cu		Multiple		Corre	
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-	•	-		-	-
0+457	386104.970	3768904.234	93.32	-		-	·	-		-	-
LAUS_12		il track: Direction:		Section: 21		n: 0+000					
	Train t	уре		Number	of trains		Speed	Length per		Emissio	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
	-		0	3		0	32	203	-	55.0	-
Track		rdinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	6	Emissio	1
km				[dB]		[dl	B]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-	.	-		-	-
0+483	386072.904	3768910.668	93.58	-		-	.	-		-	-
1											

LAUS_12	R	ail track: Direction:		Section: 22	Kn	n: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
	-		0	3		0	32	203	-	55.0	-
Track	1	ordinates of track axis	_	Track		Cu	-	Multiple			ected
Station	Х	Y	Z	type		rad		reflections	5		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-	-	-		-	-
0+483	386062.371	3768915.046	93.73	-		-		-		-	-
LAUS12_futureHS		ail track: Direction:		Section: 23		n: 0+000					
	Train	type		Number	of trains			Length per		Emissi	on level
				day	ni	night		train	Max	day	night
					km/h		m		dB(A)	dB(A)	
			0	15		3 32		151	-	61.2	56.5
— — 1	-	11 A A A A A A	0	3		0	32	203	-	55.0	-
Track	1	ordinates of track axis	_	Track		Cu		Multiple			ected
Station	Х	Y	Z	type		rad		reflections	5		on level
km				[dB]		[d	-	[dB]		day	night
0+000 0+398	386056.081 386134.905	3768911.282 3769300.687	93.66	-		-		-		-	-
			91.92	-	14 m	-	- 1	-		-	-
LAUS_12		ail track: Direction:		Section: 24		m: 0+000		I			
	Train	type			of trains		Speed	Length per			on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
Trook	0-	ardinates of track asis	0	3 Trook		0 Cu	32	203	-	55.0	- ected
Track Station	X X	ordinates of track axis	z	Track		rad	-	Multiple reflections			ected on level
	^	Ĭ	2	type							
km	000470 400	0700004 0 47	04.00	[dB]		[d	-	[dB]		day	night
0+000	386178.406	3769381.047	91.92 89.57	-		-		-		-	-
0+481	0+481 386077.284 3768910.870			-	I	-	-	-		-	-
1											

LAUS_12	Ra	ail track: Direction:		Section: 25	Kn	m: 0+000	_	-		-	
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
			0	3		0	32	203	-	55.0	-
Track	1	ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	;	Emissio	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-	-	-		-	-
0+483	386088.708	3768906.239	89.41	-		-	·	-		-	-
Throat6	Ra	ail track: Direction:		Section: 26	Kn	n: 0+000		1			
	Train	type		Number	of trains		Speed	Length per		Emissio	on level
				day	ni	ight		train	Max	day	night
					km/h		m		dB(A)	dB(A)	
		0	39		7	32	151	-	65.4	60.0	
			0	7		0	32	203	-	58.1	-
Track		ordinates of track axis		Track		Cu	-	Multiple		Corre	
Station	X	Y	Z	type		rad		reflections	;		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386218.875	3769479.511	89.92	-		-	-	-		-	-
0+427	386528.833	3769712.436	89.92	-			·	-		-	-
Throat6	Ra	ail track: Direction:		Section: 27	Kn	m: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissio	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		7	32	151	-	64.3	60.0
			0	7		0	32	203	-	58.1	-
Track		ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad	lius	reflections	•	Emissio	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386218.718	3769479.515	89.92	-		-	-	-		-	-
0+094	386178.905	3769394.567	91.92	-		-	-	-		-	-

Throat6		ail track: Direction:		Section: 28	Km: 0+000	-			-	
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0 0	30 7	7 0	32 32	151 203	-	64.3 58.1	60.0 -
Track	Co	ordinates of track axis		Track	C	urve	Multiple			ected
Station	Х	Y	Z	type	ra	dius	reflections	5	Emissi	on level
km				[dB]	[dB]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-	-		-	-
0+531	386527.929	3769722.157	89.92	-		-	-		-	-
Throat6		ail track: Direction:		Section: 29	Km: 0+000					
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
			0		7	km/h	m 151		dB(A)	dB(A)
			0	30 7	7 0	32 32	151 203	-	64.3 58.1	60.0
Track	Со	ordinates of track axis	0	Track		urve	Multiple			ected
Station	X	Y	Z	type		dius	reflections	5		on level
km				[dB]		dB]	[dB]		day	night
0+000	386174.793	3769396.361	89.92	-		-	-		-	-
0+526	386528.159	3769717.272	89.92	-		-	-		-	-
Loop1	R	ail track: Direction:		Section: 30	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
	-		0	60	0	32	151	-	67.3	-
Track	1	ordinates of track axis	_	Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	5		on level
km	000000 744	0700000 405	04.45	[dB]	Ľ	dB]	[dB]		day	night
0+000 0+754	386626.714 386721.490	3768836.135 3769547.532	84.15 89.92	-		-	-		-	-
01704	000721.400	5705547.552	00.02	1	I	I				I
Î										
										1/9/2020

NE 4trk	R	ail track: Direction:		Section: 31	K	(m: 0+000					
	Train			Number			Speed	Length per		Emissi	on level
	Train	type		day	1	s night	Opeeu	train	Max	day	night
				uay	'	iigin	km/h	m	IVIAX	dB(A)	dB(A)
			0	45		10	32	151	-	66.0	61.7
			0	10		0	32	203	-	59.9	-
Track	1	ordinates of track axis		Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[d	-	[dB]		day	night
0+000	386528.833	3769712.436	89.92	-		-		-		-	-
0+107 AmtrakEast, SBL, 2	386635.696	3769718.031 ail track: Direction:	91.31	Section: 32			•	-		-	-
Amilakeasi, SDL, 2							Creed	L a marth man		Entinei	an laval
	Train	туре		Number day	1	s night	Speed	Length per train	Max	day	on level
				uay	r	nigni	km/h	m	IVIAX	dB(A)	dB(A)
			0	12		4	32	151	-	60.3	57.7
Track	Coc	ordinates of track axis	5	Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad	ius	reflections	5	Emissi	on level
km				[dB]		[d	В]	[dB]		day	night
0+000	386603.806	3769725.686	89.92	-		-		-		-	-
0+309	386912.028	3769750.728	91.91	-				-		-	-
Riverside		ail track: Direction:		Section: 33		ím: 0+000		1		[
	Train	type		Number	1		Speed	Length per			on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	1	ordinates of track axis	-	Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km 0+000	386823.638	3769577.065	89.26	[dB]		[d	-	[dB]		day -	night
0+000	386635.696	3769718.031	91.31	-		-		-		-	-
North3		ail track: Direction:		Section: 34	K	ím: 0+000	L.			1	I
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	r r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	56		12	32	151	-	67.0	62.5
Track		ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[d	-	[dB]		day	night
0+000 0+595	386592.696 386894.000	3769724.249 3770187.092	89.92 91.44	-		-		-		-	-
0+395	300094.000	3110101.092	91.44	-			-	-		-	-

Train type Coordin X 386460.712 386417.138 Rail tr Train type	ates of track axis Y 3767860.643 3768147.017 ack: Direction:	0 0 Z 79.58 80.77	Number of day 89 17 Track type [dB] - - Section: 36	night 16 4 Cu rac [d	Speed km/h 32 32 irve dius IB]	Length per train m 151 203 Multiple reflections [dB]	Max	day dB(A) 69.0 62.0 Corre	on level night dB(A) 63.8 58.0 ected on level night
X 386460.712 386417.138 Rail tr	Y 3767860.643 3768147.017 ack: Direction:	0 Z 79.58	89 17 Track type [dB]	16 4 Cu rac	32 32 irve dius IB]	m 151 203 Multiple reflections [dB]	-	dB(A) 69.0 62.0 Corre Emissio day	dB(A) 63.8 58.0 ected on level night
X 386460.712 386417.138 Rail tr	Y 3767860.643 3768147.017 ack: Direction:	0 Z 79.58	17 Track type [dB] - -	4 Cu rac [d	32 32 irve dius IB]	151 203 Multiple reflections [dB]	-	69.0 62.0 Corre Emissio day	63.8 58.0 ected on level night
X 386460.712 386417.138 Rail tr	Y 3767860.643 3768147.017 ack: Direction:	0 Z 79.58	17 Track type [dB] - -	4 Cu rac [d	32 Irve dius IB]	203 Multiple reflections [dB]	-	62.0 Corre Emissio day	58.0 ected on level night
X 386460.712 386417.138 Rail tr	Y 3767860.643 3768147.017 ack: Direction:	79.58	type [dB] - -	rac [d	irve dius IB]	Multiple reflections [dB]		Corre Emissio day	ected on level night
386460.712 386417.138 Rail tr	3767860.643 3768147.017 ack: Direction:	79.58	[dB] - -	[d	IB]	[dB] -		day	night
386417.138 Rail tr	3768147.017 ack: Direction:		-		-	-			
386417.138 Rail tr	3768147.017 ack: Direction:		-		-				
Rail tr	ack: Direction:	80.77			-				-
			Section. So	Km: 0+000		-		-	-
Haintype			Number o		Speed	Length per		Emissi	on level
			day	night	Speed	train	Мах	day	night
			uuy	ingin	km/h	m	Max	dB(A)	dB(A)
		0	30	0	32	203	-	64.5	-
	nates of track axis		Track		irve	Multiple			ected
X	Y	Z	type		dius	reflections			on level
	070000 557	00.55			-	[dB]		day	night
			-			-		-	-
		·	Section: 37	Km: 0+000					
Train type)		Number o	of trains	Speed	Length per		Emissi	on level
			day	night		train	Max	day	night
						m			dB(A)
									63.8 58.0
Coordin	ates of track axis	Ű	Track	-					ected
x	Y	z	type	rac	lius			Emissi	on level
			[dB]	[d	IB]	[dB]		day	night
386456.132	3767859.838	79.84	-			-		-	-
386425.543	3768034.133	80.77	-	I	-	-	l	-	-
	Train type Coordir X	386663.231 3769678.137 Rail track: Direction: Train type Kail track: Direction: Train type Same track: X Y 386456.132 Same track: Same track assis	386663.231 3769678.137 90.50 Rail track: Direction: Train type O	386663.231 3769678.137 90.50 - Rail track: Direction: Section: 37 Train type Number of day day Image: Control of track axis 0 89 Cordinates of track axis Track Track X Y Z type 386456.132 3767859.838 79.84 -	386630.738 3769696.557 90.55 - <td>386630.738 3769696.557 90.55 -<td>386630.738 3769696.557 90.55 -<td>386630.738 3769696.557 90.55 -<</td><td>386630.738 3769696.557 90.55 -<</td></td></td>	386630.738 3769696.557 90.55 - <td>386630.738 3769696.557 90.55 -<td>386630.738 3769696.557 90.55 -<</td><td>386630.738 3769696.557 90.55 -<</td></td>	386630.738 3769696.557 90.55 - <td>386630.738 3769696.557 90.55 -<</td> <td>386630.738 3769696.557 90.55 -<</td>	386630.738 3769696.557 90.55 -<	386630.738 3769696.557 90.55 -<

South5_noHSR	R	ail track: Direction:		Section: 38	Km:	: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nig	ght	·	train	Max	day	night
					-		km/h	m		dB(A)	dB(A)
			0	89		16	32	151	-	69.0	63.8
			0	17		4	32	203	-	62.0	58.0
Track	1	ordinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386425.610	3768034.139	80.77	-		-		-		-	-
0+116	386412.591	3768149.464	80.77	-			·	-		-	-
Throa6		ail track: Direction:		Section: 39		: 0+000					
	Train	type			of trains		Speed	Length per			on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		7	32	151	-	64.3	60.0
Tract	0.		0	<u>10</u>		0	32	203	-	59.9	-
Track		ordinates of track axis	-	Track		Cur	-	Multiple			ected
Station	Х	Y	Z	type		radi		reflections	5		on level
km	000470.005	0700004 507	04.00	[dB]		[dl	-	[dB]		day	night
0+000 0+104	386178.905 386134.905	3769394.567 3769300.687	91.92 91.92	-		-		-		-	-
Throat6		ail track: Direction:	51.52	Section: 40	Km:	: 0+000		-			-
Throato	Train				of trains	. 0+000	Speed	Longth por		Emioni	on level
	Talli	type			1		Speed	Length per train	Max		
				day	nig	yni j	km/h		IVIAX	day dB(A)	night dB(A)
			0	30		7	32	m 151	_	64.3	60.0
			0	30 10		0	32	203	-	59.9	
Track	Co	ordinates of track axis	0	Track		Cur		Multiple			ected
Station	X	Y	Z	type		rad	-	reflections	5		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-	-	-		-	-
0+152	386110.318	3769258.991	91.92	-		-	.	-		-	-
ĺ											

Throat6	R	ail track: Direction:		Section: 41	Km	n: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
						•	km/h	m		dB(A)	dB(A)
			0	30		7	32	151	-	64.3	60.0
			0	7		0	32	203	-	58.1	-
Track	1	ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386207.420	3769444.399	89.92	-		-		-		-	-
0+420	386491.280	3769703.788	89.92	-		-	·	-		-	-
Throat6		ail track: Direction:		Section: 42		n: 0+000					
	Train	type			of trains		Speed	Length per			on level
				day	ni	ight		train	Max	day	night
			-			_	km/h	m		dB(A)	dB(A)
			0	30 7		7 0	32 32	151 203	-	64.3 58.1	60.0
Track	Cor	ordinates of track axis	0	Track		Cu		Multiple	-		ected
Station	x	Y	z	type		rad	-	reflections			on level
km	~	'	2	[dB]		[dl		[dB]	,	day	night
0+000	386207.338	3769444.437	89.92	-		<u> </u>	-	-		-	-
0+070	386178.406	3769381.047	91.92	-		-		-		-	-
LAUS_12	R	ail track: Direction:		Section: 43	Km	n: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	3		0	16	203	-	57.7	-
Track		ordinates of track axis		Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	6		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-		-		-	-
0+075	386203.614	3769425.526	89.92	-	I	-	·	-		-	-

LAUS_12	R	ail track: Direction:		Section: 44	Km: (0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	3		0	16	203	-	57.7	-
Track	1	ordinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		radi		reflections	;	Emissi	1
km				[dB]		[dE	3]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-		-		-	-
0+532	386109.172	3768903.494	93.32	-		-		-		-	-
LAUS_12	R	ail track: Direction:		Section: 45	Km: (0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	3		0	16	203	-	57.7	-
Track	1	ordinates of track axis	_	Track		Cur		Multiple			ected
Station	X	Y	Z	type		radi		reflections	;		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-		-		-	-
0+532	386121.048	3768901.251	93.10	-		-		-		-	-
LAUS12		ail track: Direction:		Section: 46		0+000		1			
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	3		0	16	203	-	57.7	
Track		ordinates of track axis	_	Track		Cur	-	Multiple			ected
Station	Х	Y	Z	type		radi		reflections		Emissi	1
km				[dB]		[dE	3]	[dB]		day	night
0+000	386044.035	3768914.069	93.78	-		-		-		-	-
0+399	386134.905	3769300.687	91.92	-		-		-	l	-	-
1											

LAUS12	Ra	il track: Direction:		Section: 47	Km: 0+000)				
	Train t	vpe		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
				,	Ŭ	km/h	m		dB(Å)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	3	0	16	203	-	57.7	-
Track	1	rdinates of track axis	_	Track		Curve	Multiple			ected
Station	X	Y	Z	type	1	adius	reflections	6		on level
km	000000.054	0700040 400	00.75	[dB]		[dB]	[dB]		day	night
0+000 0+354	386039.054 386110.318	3768912.182 3769258.991	93.75 91.92	-		-	-		-	-
LAUS12		il track: Direction:	91.92	Section: 48	Km: 0+000	-	-		-	-
	Train t			Number		Speed	Length per		Emicoi	on level
	Tant	уре		day	night	Opeed	train	Max	day	night
				uay	ingin	km/h	m	IVIAA	dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	3	0	16	203	-	57.7	-
Track	Coo	rdinates of track axis		Track		Curve	Multiple		Corr	ected
Station	X	Y	Z	type		adius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386110.318	3769258.991	91.92	-		-	-		-	-
0+358	386026.567	3768912.709 il track: Direction:	93.81	Section: 49		-	-		-	-
GoldNB_Reloc					Km: 0+000		Les ath as a		Enteri	e e les sel
	Train t	уре		Number		Speed	Length per	Mari		on level
				day	night	km/h	train m	Max	day dB(A)	night dB(A)
Track	Coo	rdinates of track axis		Track		Curve	Multiple			ected
Station	x		Z	type		adius	reflections			on level
km	~	•	2	[dB]		[dB]	[dB]	,	day	night
0+000	386006.651	3768862.937	91.29	-		-	-		-	-
0+853	385999.210	3769650.932	88.37	-		-	-		-	-
GoldSB_Reloc	Ra	il track: Direction:		Section: 50	Km: 0+000)				
	Train t	уре		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Track	Coo	rdinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		adius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386001.861	3768863.845	89.92	-		-	-		-	-
0+848	385995.788	3769646.440	88.31	-		-	-		-	-

1/9/2020

SoundPLAN 8.1

Train typeNumber J trains daySpeedLength per train<	<th>Loop2</th> <th>Rail tr</th> <th></th> <th></th> <th>Section: 51</th> <th>Km: 0+000</th> <th></th> <th></th> <th></th> <th></th> <th></th>	Loop2	Rail tr			Section: 51	Km: 0+000					
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Train type					Speed				1	
Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections reflections reflections Emission level Wn Y Z (dB) (dB) (dB) (dB) (day night 0+000 386725.218 3769569.313 89.92 · <td></td> <td></td> <td></td> <td></td> <td>day</td> <td>night</td> <td></td> <td>train</td> <td>Max</td> <td>•</td> <td>-</td>					day	night		train	Max	•	-	
Track Station km Coordinates of track axis Track Y Track (dB) Curve radius Multiple (dB) Multiple (dB) Corrected method (dB) Corrected (dB) 0+000 386731 600 3769516.995 89.92 <td></td> <td>dB(A)</td>											dB(A)	
$ \ \ \ \ \ \ \ \ \ \ \ \ \ $				0					-			
$\begin matrix $		1	1									
0+000 0+053 386731.600 386722.218 3769516.995 3769569.313 89.92 89.92 - </td <td></td> <td>X</td> <td>Y</td> <td>Z</td> <td></td> <td></td> <td></td> <td></td> <td>S</td> <td></td> <td>1</td>		X	Y	Z					S		1	
$ \begin{array}{ c c c c c c } \hline \begin bold \\ \hline \begin b$					[dB]	[(dB]	[dB]		day	night	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $												
Train type Number of trains day Speed night Length per train km/h Length per maint Emission level day might might 0 45 10 32 10 - 66.0 61.7 Track Coordinates of track axis Track Curve Multiple - 66.0 61.7 Station X Y Z type radius radius reflections Emission level 0+000 386527.929 3769722.157 89.92 -				89.92			-	-		-	-	
$ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	NE_4trk				Section: 52	Km: 0+000	-	1				
$ \begin{array}{ c c c c c } \hline \begin matrix mat$		Train type	•				Speed	Length per			1	
$\begin{tabular}{ c c c c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$					day	night		train	Max	day	night	
$ \begin{array}{c c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$								m				
$ \begin{array}{ c c c c } \hline Track & \hline C \cup rinktes of track axis & Track & \hline C urve & Multiple & Multiple & Correct \\ \hline Station & X & Y & Z & type & radius & reflections & Emission level \\ \hline km & & & & & & & & & & & & & & & & & & $									-		61.7	
$ \begin{array}{ c c c c } \hline Station & X & Y & Z & type & radius & reflections & Tereflections & Tereflec$				0					-			
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0+000 0+080 386527.929 386607.050 3769722.157 3769730.723 89.92 89.92 - 0 </td <td></td> <td>X</td> <td>Y</td> <td>Z</td> <td></td> <td></td> <td></td> <td></td> <td>S</td> <td></td> <td>1</td>		X	Y	Z					S		1	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					[dB]	[(dB]	[dB]		day	night	
NE_4trk Rail track: Direction: Section: Section: Smither Speed Length per Max day night Train type Image: Section: Number of trains Speed Length per Max day night day night Image: Section: Speed Length per Max day night day night Image: Section: Speed Length per Max day night day night Image: Section: Speed Length per Max day night day night Image: Section: Speed Length per Max day night day 10 0 32 151 - 66.0 61.7 Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km 0+000 386528.159 37697					-		-	-			-	
Train type Number of trains Speed Length per train Max Emission level day night day night night km/h m day night day 10 32 151 - 66.0 61.7 0 45 10 32 203 - 59.9 - Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km [dB] [dB] [dB] day night				89.92	-		-	-		-	-	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	NE_4trk						-					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Train type					Speed	Length per			1	
$ \begin{array}{ c c c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$					day	night		train	Max		-	
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Station X Y Z type radius reflections Emission Level km -	Traci	•		0					-			
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0+000 386528.159 3769717.272 89.92		X	Y	Z	••				5		1	
0+065 386592.696 3769724.249 89.92								-		-	-	
	0+065	386592.696	3769724.249	89.92	-	I	-	-		-	-	

$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$					Km: 0+000	ction: 54			k: Direction:	Rail trac		North2
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Emission level		Length per	Speed	ns	Number of trai				Train type		
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	day night	Max			night	day						
Track Station Coordinates of track axis Track Curve type Multiple radius Multiple reflections 0+000 0+571 386607.050 386689.616 3770188.510 91.44 - - - - Throat6 Rail track: Direction: Section: 55 Km: 0+000 -	dB(A) dB(A)		m	km/h	-							
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	67.0 62.5	-	-	32	12	56)	0				
km [dB] [Corrected		Multiple	irve	Cu	Track			es of track axis	Coordinate		
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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	day night		[dB]	B]	[d	[dB]						
Throat6 Rail track: Direction: Section: 55 Km: 0+000 Train type Number of trains day Number of trains might Speed Length per train Max 0 30 7 32 151 yes 0 7 0 32 203 - Track Coordinates of track axis Track Curve Multiple Km Y Z type radius reflections 6(B] (dB] (dB] (dB] (dB] (dB] 0 386203.614 3769425.526 89.92 - - - - Throat6 Rail track: Direction: Section: 56 Km: 0+221 - - - Train type Train type 0 30 7 32 151 - Train type 0 30 7 32 151 - Train type 0 7 0 32 203 - <t< td=""><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			-	-	-	-						
Train type Number of trains day Speed night Length per train Max day night km/h m Max cordinates of track axis 0 7 32 151 yes 151 Track Coordinates of track axis 0 7 0 32 203 - 151 Track Coordinates of track axis Track Curve Multiple 151			-	-		-	4	91.44			386	0+571
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				-	Km: 0+000	ction: 55			k: Direction:	Rail trac		Throat6
$\begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Emission level		Length per	Speed	ns	Number of trai				Train type		
$\begin{tabular}{ c c c c c c c c c c c } \hline \hline & & & & & & & & & & & & & & & & & $	day night	Max	train		night	day						
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	dB(A) dB(A)		m	km/h								
Track Coordinates of track axis Track Curve Multiple Station X Y Z type radius reflections km 1 3769425.526 89.92 - - - - 0+000 386203.614 3769425.526 89.92 - - - - - Throat6 Rail track: Direction: Section: 56 Km: 0+221 Km: 0+221 Train type Number of trains Speed Length per Max - 0 30 7 32 151 - - Track Coordinates of track axis Track Curve Multiple - Track X Y Z type radius reflections	64.3 60.0	yes										
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	58.1 -	-			1			0				
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Corrected								1	1		
0+000 386203.614 3769425.526 89.92 -	Emission level	5						Z	Y		X	
Throat6 Rail track: Direction: Section: 56 Km: 0+221 Train type Number of trains Speed Length per Max day night km/h m day frain Max day night km/h m day frain Max day night km/h m day day frain Max day night km/h m day day frain Max frain frain<	day night		[dB]	B]	[d							
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day night train Max km/h m m c 0 30 7 32 151 - 0 7 0 32 203 - 1 7 0 32 203 - 1 7 0 32 203 - 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					Km: 0+221	ction: 56			k: Direction:	Rail trac		Throat6
km/h m d d 0 30 7 32 151 - 0 0 7 0 32 203 - 0 Track Coordinates of track axis Track Curve Multiple - 5 Station X Y Z type radius reflections - -	Emission level		Length per	Speed	ns	Number of trai				Train type		
0 30 7 32 151 - 0 7 0 32 203 - Track Coordinates of track axis Track Curve Multiple Station X Y Z type radius reflections	day night	Max	train		night	day						
O 7 0 32 203 - Track Coordinates of track axis Track Curve Multiple Multiple Station Y Z type radius reflections reflections Station Statio	dB(A) dB(A)											
Track Coordinates of track axis Track Curve Multiple Station X Y Z type radius reflections	64.3 60.0	-										
Station X Y Z type radius reflections	58.1 -	-						0		0	i	
	Corrected							_	1	1		
	Emission level	3						Z	Y		X	
	day night		[dB]	-		[dB]	-					km
0+221 386300.889 3769623.792 89.92			-									
0+436 386493.600 3769699.206 89.92	- -		-	-		-	2	89.92	3769699.206	86493.600	386	0+436

Throat6 plus Alt1		ail track: Direction:		Section: 57	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0 0	30 7	7 0	32 32	151 203	yes -	64.3 58.1	60.0 -
Track	Co	ordinates of track axis		Track	Cu	irve	Multiple		Corr	ected
Station	Х	Y	Z	type	rad	dius	reflections	5	Emissi	on level
km				[dB]	[c	JB]	[dB]		day	night
0+000	386520.646	3769726.431	89.92	-		-	-		-	-
0+608	386143.202	3769324.760	91.33	-		-	-		-	-
North 2 - Alt1 Share		ail track: Direction:		Section: 58	Km: 0+000	1		-		
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	56	12	32	151	yes	67.0	62.5
Track		ordinates of track axis	_	Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	5		on level
km				[dB]		JB]	[dB]		day	night
0+000 0+226	386776.713 386605.972	3769867.608 3769735.637	91.44 90.09	-		-	-		-	-
HSR_2trk		ail track: Direction:		Section: 59	Km: 0+000					1
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	15	3	32	151	yes	61.2	56.5
			0	3	0	32	203	-	55.0	-
Track		ordinates of track axis	_	Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	5		on level
km				[dB]		JB]	[dB]		day	night
0+000 0+086	386110.532 386143.202	3769245.213 3769324.760	91.92 91.33	-		-	-		-	-

Loop2 Horn	R	ail track: Direction:		Section: 60	Km: 0+030					
	Train			Number	of trains	Speed	Length per		Emissi	on level
		.)		day	night		train	Max	day	night
					5	km/h	m		dB(A)	dB(A)
			0	30	0	32	203	-	64.5	-
Track	Co	ordinates of track axis		Track	C	urve	Multiple		Corr	ected
Station	Х	Y	Z	type	ra	dius	reflections	6	Emissi	on level
km				[dB]	[dB]	[dB]		day	night
0+030	386663.160	3769662.289	90.02	-		-	-		-	-
0+074	386625.852	3769686.136	90.11	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 61	Km: 0+000	1	T		F	
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Tarat		andiantes of trade and	0	13 Track	0	32	203	yes	77.9	
Track	1	ordinates of track axis	-	Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	5		on level
km	200005.052	2700000 420	00.44	[dB]	Ľ	dB]	[dB]		day	night
0+000 0+098	386625.852 386530.357	3769686.136 3769701.484	90.11 89.92	-		-	-		-	-
ThroatExit_S_W of			00:02							1
	r River w Horn R	ail track: Direction:		Section: 62	Km: 0+000					
	TRIVER W HORN R			Section: 62 Number		Speed	Length per		Emissi	on level
						Speed	Length per train	Мах	Emissi day	on level
				Number day	of trains	km/h	train m	Max	day dB(A)	1
			0	Number day 13	of trains		train m 203	Max yes	day dB(A) 77.9	night dB(A)
Track	Train	type ordinates of track axis		Number day	of trains night 0 C	km/h 32 urve	train m		day dB(A) 77.9 Corr	night dB(A) - ected
Track Station	Train	type	0 Z	Number day 13 Track type	of trains night 0 C ra	km/h 32 urve dius	train m 203 Multiple reflections	yes	day dB(A) 77.9 Corr	night dB(A)
Track Station km	Train Co X	type ordinates of track axis Y	Z	Number day 13 Track type [dB]	of trains night 0 C ra	km/h 32 urve	train m 203 Multiple	yes	day dB(A) 77.9 Corr	night dB(A) - ected
Track Station km 0+000	Train Co X 386663.431	type ordinates of track axis Y 3769678.014	Z 90.52	Number day 13 Track type [dB]	of trains night 0 C ra	km/h 32 urve dius	train m 203 Multiple reflections [dB]	yes	day dB(A) 77.9 Corr Emissi day	night dB(A)
Track Station km 0+000 0+127	Co X 386663.431 386722.216	type ordinates of track axis Y 3769678.014 3769569.318	Z	Number day 13 Track type [dB] -	of trains night 0 C ra	km/h 32 urve dius	train m 203 Multiple reflections	yes	day dB(A) 77.9 Corr Emissi	night dB(A) ected on level
Track Station km 0+000	Train Co X 386663.431 386722.216 f River w Horn R	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	Z 90.52	Number day 13 Track type [dB] - Section: 63	of trains night 0 C ra [] Km: 0+000	km/h 32 urve dius dB]	train m 203 Multiple reflections [dB]	yes	day dB(A) 77.9 Corr Emissi day - -	night dB(A) - ected on level night - -
Track Station km 0+000 0+127	Co X 386663.431 386722.216	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	Z 90.52	Number day 13 Track type [dB] - Section: 63 Number	of trains night 0 C ra [[Km: 0+000 of trains	km/h 32 urve dius	train m 203 Multiple reflections [dB] - - Length per	yes	day dB(A) 77.9 Corr Emissi day - - Emissi	night dB(A) - ected on level - - - -
Track Station km 0+000 0+127	Train Co X 386663.431 386722.216 f River w Horn R	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	Z 90.52	Number day 13 Track type [dB] - Section: 63	of trains night 0 C ra [] Km: 0+000	km/h 32 urve dius dB] - - - Speed	train m 203 Multiple reflections [dB] - - -	yes	day dB(A) 77.9 Corr Emissi day - - Emissi day	night dB(A) - ected on level - - - - on level night
Track Station km 0+000 0+127	Train Co X 386663.431 386722.216 f River w Horn R	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	Z 90.52 89.92	Number day 13 Track type [dB] 	of trains night 0 C ra [[Km: 0+000 of trains night	km/h 32 urve dius dB] - - Speed km/h	train m 203 Multiple reflections [dB] - - - Length per train m	yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A)	night dB(A) - ected on level - - - -
Track Station km 0+000 0+127	Train Co X 386663.431 386722.216 f River w Horn R Train	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type	Z 90.52	Number day 13 Track type [dB] 	of trains night 0 C ra [Km: 0+000 of trains night 0	km/h 32 urve dius dB] - - - Speed	train m 203 Multiple reflections [dB] - - Length per train m 203	yes	day dB(A) 77.9 Corr Emissi day - - Emissi day dB(A) 77.9	night dB(A) - ected on level - - on level night dB(A) -
Track Station km 0+000 0+127 ThroatExit_S_W of	Train Co X 386663.431 386722.216 f River w Horn R Train Co	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction:	Z 90.52 89.92	Number day 13 Track type [dB] - - Section: 63 Number day 13 Track	of trains night 0 C ra [Km: 0+000 of trains night 0 C	km/h 32 urve dius dB] - - - - Speed km/h 32 urve	train m 203 Multiple reflections [dB] - - - Length per train m	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr	night dB(A) - ected on level - - - - on level night
Track Station km 0+000 0+127 ThroatExit_S_W of Track	Train Co X 386663.431 386722.216 f River w Horn R Train	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type ordinates of track axis	Z 90.52 89.92	Number day 13 Track type [dB] - - Section: 63 Number day 13 Track type	of trains night 0 C ra [[Km: 0+000 of trains night 0 C ra	km/h 32 urve dius dB] - - - - - - - - - - - - - - - - - - -	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr Emissi	night dB(A) - ected on level night - on level night dB(A) - ected on level
Track Station km 0+000 0+127 ThroatExit_S_W of Track Station km	Train Co X 386663.431 386722.216 f River w Horn R Train Co X	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type ordinates of track axis Y	Z 90.52 89.92 0 Z	Number day 13 Track type [dB] - - Section: 63 Number day 13 Track	of trains night 0 C ra [[Km: 0+000 of trains night 0 C ra	km/h 32 urve dius dB] - - - - Speed km/h 32 urve	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr	night dB(A) - ected on level - on level night dB(A) - ected
Track Station km 0+000 0+127 ThroatExit_S_W of Track Station	Train Co X 386663.431 386722.216 f River w Horn R Train Co	type ordinates of track axis Y 3769678.014 3769569.318 ail track: Direction: type ordinates of track axis	Z 90.52 89.92	Number day 13 Track type [dB] - - - - - - - - - - - - - - - - - - -	of trains night 0 C ra [[Km: 0+000 of trains night 0 C ra	km/h 32 urve dius dB] Speed km/h 32 urve dius dB]	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr Emissi	night dB(A) - ected on level night - on level night dB(A) - ected on level

ThroatExit_S_W of	River w Horn R	ail track: Direction:		Section: 64	Km: 0+000					
	Train	type		Number of	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track		ordinates of track axis		Track	C	urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections			on level
km				[dB]	[dB]	[dB]		day	night
0+000	386530.098	3769706.166	89.92	-		-	-		-	-
0+102	386630.738	3769696.557	90.55	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 65	Km: 0+000	1	1	1		
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track	1	ordinates of track axis		Track	-	urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections			on level
km				[dB]	[(dB]	[dB]		day	night
0+000	386491.286	3769703.728	89.92	-		-	-		-	-
0+039	386530.098	3769706.166	89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 66	Km: 0+000					
	Train	type		Number o		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Tasala	0.	and a star of the star suite	0	<u>13</u>	0	32	203	yes	77.9	-
Track		ordinates of track axis	7	Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections			on level
km	200520.257	0700704 404	00.00	[dB]	[dB]	[dB]		day	night
0+000 0+037	386530.357 386493.600	3769701.484 3769699.206	89.92 89.92	-		-	-		-	
ThroatExit S W of		ail track: Direction:	09.92	Section: 67	Km: 0+000	-	-		-	-
	Train			Number of		Speed	Length per		Fmissi	on level
	Tan	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		day	night	Cpood	train	Max	day	night
				day	ingit	km/h	m	max	dB(A)	dB(A)
			0	13	0	32	203	ves	77.9	-
Track	Со	ordinates of track axis	<u> </u>	Track		urve	Multiple	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		ected
Station	X	Y	Z	type	-	dius	reflections			on level
km				[dB]		dB]	[dB]		day	night
0+000	386721.464	3769547.605	89.92	-		-	-		-	-
0+032	386715.197	3769579.095	89.92	-		-	-		-	-

ThroatExit_S_W of	River w Horn R	ail track: Direction:		Section: 68	Km: 0+0	00				
	Train	type		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	13	0	32		yes	77.9	-
Track	1	ordinates of track axis		Track		Curve	Multiple			rected
Station	Х	Y	Z	type		radius	reflections	6		ion level
km				[dB]		[dB]	[dB]		day	night
0+000	386689.207	3769634.305	90.24	-		-	-		-	-
0+038	386663.062	3769662.269	90.04	-		-	-		-	-
Ventura, LOSSAN,	0	ail track: Direction:		Section: 69	Km: 0+0					
	Train	type		Number	1	Speed	Length per			ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
<u> </u>	-		0	84	18	32		yes	86.0	81.5
Track	1	ordinates of track axis		Track		Curve	Multiple			rected
Station	Х	Y	Z	type		radius	reflections	5		ion level
km				[dB]		[dB]	[dB]		day	night
0+000	386893.999	3770187.096	90.81	-		-	-		-	-
0+333	386973.752	3770507.725	-	-		-	-		-	-
Ventura, LOSSAN,	0	ail track: Direction:		Section: 70	Km: 0+0		-			
	Train	type		Number	1	Speed	Length per			ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
	•		0	84	18	32		yes	86.0	81.5
Track	1	ordinates of track axis	_	Track		Curve	Multiple			rected
Station	Х	Y	Z	type		radius	reflections	6		ion level
km				[dB]		[dB]	[dB]		day	night
0+000 0+331	386889.614	3770188.507	91.05	-		-	-		-	-
0+331 ThroatExit S W of	386966.343	3770506.879 ail track: Direction:	-	Section: 71	Km: 0+0	-	-		-	-
	Train			Number		Speed	Length per		Emico	ion level
	Tan	type		day	night	Speed	train	Max		i i
				uay	night	km/h	m	IVIAX	day dB(A)	night dB(A)
			0	17	0	32		ves	62.0	
Track	Co	ordinates of track axis	0	Track		Curve	Multiple	yes		rected
Station	x		z	type		radius	reflections	3		ion level
km	~		-	[dB]		[dB]	[dB]		day	night
0+000	386625.852	3769686.136	90.11	[db] -		-	-		-	-
0+000	386530.357	3769701.484	89.92	-		_	-		-	-

$\begin begin beg$	ThroatExit_S_W of F	River Ra	il track: Direction:		Section: 72	Km: 0+	000					
		Train t	уре		Number	of trains	Speed	k	Length per		Emissi	on level
$ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$					day	night			train	Max	day	night
$ \begin{array}{ c c c } \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $							km/h				dB(A)	dB(A)
Station km X Y Z type (dB) radus (dB) reflections- (dB) reflections- (dB) Emission level day night night 0+000 0+127 38663.431 386712.218 3769678.014 386722.218 3769678.014 386722.218 9769569.318 89.92 ·				0		0		32		yes		
$\begin begin beg$			1									
0+000 0+127 386663.431 3769578.18 3769578.014 3769569.318 90.52 89.92 - - - - <td>Station</td> <td>X</td> <td>Y</td> <td>Z</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Emissi</td> <td>ion level</td>	Station	X	Y	Z							Emissi	ion level
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					[dB]		[dB]		[dB]		day	night
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$							-		-		-	-
$ \begin{array}{ c c c c c c } \hline Train type & Train typ$				89.92			-		-		-	-
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	ThroatExit_S_W of F						000					
$ \begin{array}{ c c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabual}{ c c c c } \hline \begin{tabual}{ c c c c c } \hline \begin{tabual}{ c c c c c c } \hline \begin{tabual}{ c c c c c c c } \hline \begin{tabual}{ c c c c c c c } \hline \begin{tabual}{ c c c c c c c } \hline \begin{tabual}{ c c c c c c c } \hline \begin{tabual}{ c c c c c c c c c c c c c c c c c c c$		Train t	уре		Number	of trains	Speed	k	Length per		Emissi	ion level
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$					day	night			train	Max	day	night
$ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c } \hline \begin{tabuarray}{ c c c c } \hline \begin{tabuarray}{ c c c c } \hline \begin{tabuarray}{ c c c c c c c } \hline \begin{tabuarray}{ c c c c c c c } \hline \begin{tabuarray}{ c c c c c c c c c c c c c c c c c c c$												dB(A)
$ \begin{array}{ c c c c } Station & X & Y & Z & type & radius & reflections & Emission level \\ \hline \begin{tabular}{ c c c c } IdB & [dB] & [$				0		0		32		yes		-
$\begin boxerial relation for the target of the target of the target of the target of target of$									•			
0+000 0+061 386715.203 38688.9.207 3769579.068 37696234.305 89.92 90.24 -<	Station	X	Y	Z						5	Emissi	ion level
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					[dB]		[dB]		[dB]		day	night
ThroatExit_S_W of River Rail track: Direction: Section: 74 Km: 0+000 Train type Number of trains Speed Length per train Max day night day night day night Max day night day night km/h Max day night day night km/h Max day night day 17 0 32 203 yes 62.0 - Track Coordinates of track axis Track Curve Multiple Corrected km Idel Idel Idel Idel Idel Iday night 0+000 386530.098 3769706.166 89.92 - <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td></t<>											-	-
Train type Number of trains day Speed night Length per train Max Emission level day night dB(A) 0 17 0 32 203 yes 62.0 - Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km 1043 386530.098 3769706.166 89.92 -				90.24					-		-	-
$ \begin{array}{c c c c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	ThroatExit_S_W of F											
$ \begin{array}{c c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Train t	уре			1	Speed	k	U .		Emissi	1
$ \begin{array}{c c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$					day	night			train	Max	-	-
$\begin{tabular}{ c c c c c c c } \hline Track & \hline Courdinates of track axis & Track & Curve & Multiple & Corrected \\ \hline Station & X & Y & Z & type & radius & reflections & Emission level \\ \hline math day & night \\ \hline math day & 0.000 & 386530.098 & 3769706.166 & 89.92 & - & - & - & - & - & - & - & - & - & $												dB(A)
$ \begin{array}{c c c c c c c } Station & X & Y & Z & type & radius & reflections & Emission evel \\ \hline km & & & & & & & & & & & & & & & & & & $				0		0		32		yes		-
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		1	1						•			
0+000 0+102 386530.098 386630.738 3769706.166 3769696.557 89.92 90.55 - <td></td> <td>X</td> <td>Y</td> <td>Z</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Emissi</td> <td>1</td>		X	Y	Z							Emissi	1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $											day	night
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$											-	-
Train type Number of trains Speed Length per Max Emission level day night day night day day night day 0 17 0 32 203 yes 62.0 - Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km 1 1 1 1 1 1 1 1 1 0+000 386491.286 3769703.728 89.92 - - - - -				90.55					-		-	-
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	ThroatExit_S_W of F											
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Train t	уре			1	Speed	k	• •			1
Image: Constraint of track axis 0 17 0 32 203 yes 62.0					day	night				Max		-
Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km Image: Mark and the state of track axis km Image: Mark and the state of track axis Image: Mark and the state of track axis Image: Mark and track axis Image: Mark and the state of track axis 0+000 386491.286 3769703.728 89.92 Image: Mark and the state of track axis Image: Mark and track axis												()
Station X Y Z type radius reflections Emission km Image: Im				0		0		32		yes		
km i idB [dB] [dB] day night 0+000 386491.286 3769703.728 89.92 - <td></td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>		1	1						•			
0+000 386491.286 3769703.728 89.92		X	Y	Z								1
							[dB]		[dB]		day	night
0+039 386530.098 3769706.166 89.92 - - - - - - -							-		-		-	-
	0+039	386530.098	3769706.166	89.92	-		-		-		-	-

hroatExit_S_W of Rive		ick: Direction:		Section: 76 Number of	Km: 0+000	Snood	Longth n=r		Ensign	on level
	Train type					Speed	Length per	Max		1
				day	night	km/h	train	IVIAX	day dB(A)	night dB(A)
			0	17	0	32	m 203	yes	62.0	UB(A)
Track	Coordina	ates of track axis		Track		urve 32	Multiple	yc3		rected
Station	X	Y	Z	type		dius	reflections			ion level
km				[dB]		JB]	[dB]		day	night
0+000	386530.357	3769701.484	89.92	-		-			-	-
0+037	386493.600	3769699.206	89.92	-		-	-		-	-
hroatExit_S_W of Rive	er Rail tra	ick: Direction:		Section: 77	Km: 0+000					
	Train type			Number of	trains	Speed	Length per		Emissi	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	17	0	32	203	yes	62.0	-
Track		ates of track axis		Track		urve	Multiple			rected
Station	X	Y	Z	type		dius	reflections			ion level
km				[dB]		JB]	[dB]		day	night
0+000 0+032	386721.464 386715.197	3769547.605 3769579.095	89.92 89.92	-		-	-		-	-
hroatExit_S_W of Rive			09.92	Section: 78	Km: 0+000	-	-		-	-
	Train type	ok. Direction.		Number of		Speed	Length per		Emissi	ion level
	Пантурс			day	night	Opecca	train	Max	day	night
				uay	night	km/h	m	IVIAN	dB(A)	dB(A)
							203		64.5	-
			0	30	0	32		i ves		
Track	Coordina	ates of track axis	0	30 Track	0 Cu	32 Jrve	Multiple	yes		rected
Track Station	Coordina X	ates of track axis	Z	Track	Cu				Corr	
	1	1			Cura	irve	Multiple		Corr	rected
Station	1	1		Track type	Cu rad	urve dius	Multiple reflections		Corr Emissi	ected ion level

of NW Merge wit	Train t	100		Number o	ftroing	Speed	Longth nor		E main	sion level
	I rain t	/pe				Speed	Length per	May		
				day	night	km/h	train	Max	day dB(A)	night
			0	45	10	32	m 151		66.0	dB(A) 61.7
			0	45 10	10 0	32 32	203	yes	66.0 59.9	61.7
Track	Coo	dinates of track axis		Track	Cur		Multiple		Col	rrected
Station	X	Y	z	type	radi		reflections	;		sion level
km				[dB]	[dE		[dB]		day	night
0+237	386605.972	3769735.725	90.09	-	-		-		-	-
0+323	386520.823	3769726.431	89.92	-	-		-		-	-

HSR_2trk	R	ail track: Direction:		Section: 1	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
L			0	42	9	32		yes	65.7	61.3
Track	1	ordinates of track axis		Track		Curve	Multiple			rected
Station	X	Y	Z	type		radius	reflections	5		ion level
km				[dB]		[dB]	[dB]		day	night
0+000	386860.517	3770117.624	91.43	-		-	-		-	-
0+012	386864.465	3770129.156	91.43	-		-	-		-	-
HSR_2trk		ail track: Direction:		Section: 2	Km: 0+00					
	Train	type		Number		Speed	Length per			ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	42	9	32		yes	65.7	61.3
Track	1	ordinates of track axis	_	Track		Curve	Multiple			rected
Station	X	Y	Z	type		radius	reflections	5		ion level
km				[dB]		[dB]	[dB]		day	night
0+000	386864.465	3770129.156	91.43	-		-	-		-	-
0+031 HSR_2trk	386875.484	ail track: Direction:	91.44	Section: 3	Km: 0+00	-	-		-	-
HOR_ZUK									·	
	Train	type		Number	1	Speed	Length per			ion level
				day	night		train	Max	day	night
			0	42	9	km/h 32	m 151	ves	dB(A) 65.7	dB(A) 61.3
Track	Co	ordinates of track axis	0	42 Track		Curve	Multiple	yes		rected
Station	X		z	type		radius	reflections			ion level
km	^	I	2	[dB]		[dB]	[dB]	5	day	í
0+000	386875.484	3770158.456	91.44	[UB] 			[UD] -		uay	night
0+000	386880.201	3770169.696	91.43	-		_	-		-	_
HSR_2trk		ail track: Direction:	0.110	Section: 4	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
					-	km/h	m		dB(A)	dB(A)
			0	42	9	32		yes	65.7	61.3
Track	Co	ordinates of track axis		Track		Curve	Multiple		Cor	rected
Station	X	Y	Z	type		radius	reflections	5	Emiss	ion level
km				[dB]		[dB]	[dB]		day	night
0+000	386880.201	3770169.696	91.43	-		-	-		-	-

HSR_2trk	R	ail track: Direction:		Section: 5	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
					-	km/h	m		dB(A)	dB(A)
			0	42	9	32	151	yes	65.7	61.3
Track	Co	ordinates of track axis		Track	C	urve	Multiple		Corr	ected
Station	Х	Y	Z	type		idius	reflections	;	Emissi	on level
km				[dB]	[dB]	[dB]		day	night
0+000	386796.784	3769931.452	90.62	-		-	-		-	-
0+012	386792.782	3769919.939	91.19	-		-	-		-	-
HSR_1trk		ail track: Direction:		Section: 6	Km: 0+000	-	1			
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
			-			km/h	m		dB(A)	dB(A)
Troold	0	ardinates of track asis	0	42 Track	9	32	151	yes	65.7 Corr	61.3 ected
Track	1	ordinates of track axis	z	Track	-	urve	Multiple			
Station	Х	Ŷ	2	type		dius dB]	reflections			on level
km 0+000	386796.784	3769931.452	90.62	[dB]	L	<u>авј</u>	[dB]		day	night
0+000	386864.465	3770129.156	90.82	-		-	-		-	-
HSR_2trk_throat7		ail track: Direction:	01110	Section: 7	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	42	9	32	151	yes	65.7	61.3
Track	1	ordinates of track axis		Track	-	urve	Multiple			ected
Station	Х	Y	Z	type		idius	reflections	;	Emissi	on level
km				[dB]	[dB]	[dB]		day	night
0+000	386520.669	3769727.961	89.92	-		-	-		-	-
0+610 HSR_2trk_convent	386143.202	3769324.760 ail track: Direction:	91.33	Section: 8	Km: 0+000	-	-		-	-
	Train			Number		Speed	Length per		Fmiesi	on level
	iidiii	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		day	night	Opecu	train	Мах	day	night
				aay	night	km/h	m	WidA	dB(A)	dB(A)
			0	42	9	32	151	ves	65.7	61.3
			-	Track	C	urve	Multiple			ected
Track	Co	ordinates of track axis		THUCK						
Track Station	Coo X	ordinates of track axis Y	z	type	ra	dius	reflections		Emissi	on level
	1	1	Z			dius dB]	reflections [dB]		Emissi day	on level
Station	1	1	Z 91.44	type				•		1
Station km	Х	Y		type [dB]		dB]	[dB]	;		1

HSR_2trk_Throat7	R	ail track: Direction:		Section: 9	Km: 0+000					
hort_zin_moan	Train				of trains	Speed	Length per		Emissi	on level
	- Tuli	()po		day	night	Opood	train	Max	day	night
				,	g	km/h	m		dB(A)	dB(A)
			0	26	6	32	151	yes	63.6	59.3
			0	3	0	32	203	-	55.0	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		adius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386524.324	3769733.414	89.89	-		-	-		-	-
0+620	386139.200	3769325.196	91.20	-		-	-		-	-
HSR_2trk_throat7		ail track: Direction:		Section: 10	Km: 0+000		1			
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	26	6	32	151	yes	63.6	59.3
Track	Co	ordinates of track axis	0	6 Track	0	32 Curve	203 Multiple	-	57.4 Corr	ected
Station	x		z	type		adius	reflections			on level
km	^	I	2	[dB]		[dB]	[dB]	>	day	night
0+000	386110.532	3769245.213	91.92	[UD] -		[UD]	[ub]		uay	nıgrı
0+000	386143.202	3769324.760	91.33	-		_	-		-	-
HSR_2trk_throat7		ail track: Direction:	01100	Section: 11	Km: 0+000	1				
	Train				of trains	Speed	Length per		Emissi	on level
	Train 1	()po		day	night	Opood	train	Max	day	night
				uuy	l	km/h	m	max	dB(A)	dB(A)
			0	26	6	32	151	ves	63.6	59.3
			0	6	0	32	203	-	57.4	
Track	Coo	ordinates of track axis		Track	(Curve	Multiple		Corr	ected
Station	X	Y	Z	type	r	adius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386139.200	3769325.196	91.20	-		-	-		-	-
0+072	386110.318	3769258.991	91.92	-		-	-		-	-

HSR_2trk-4trak NOr		ail track: Direction:		Section: 12	Km: 0+000					
	Train t	type		Number of		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	42	9	32	151	yes	65.7	61.3
Track	Coo	ordinates of track axis		Track	Cu	irve	Multiple		Corre	
Station	X	Y	Z	type		lius	reflections		Emissio	on level
km				[dB]	[d	IB]	[dB]		day	night
0+000	386792.782	3769919.939	91.19	-		-	-		-	-
0+272	386606.968	3769742.417	89.89	-		-	-		-	-
South10_HSR4	Ra	ail track: Direction:		Section: 13	Km: 0+000					
	Train t	type		Number of	f trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	18	3	16	151	yes	64.8	59.5
			0	3	1	16	203	-	57.7	53.7
Track	1	ordinates of track axis		Track		irve	Multiple		Corre	
Station	X	Y	Z	type		lius	reflections		Emissio	on level
km				[dB]	[d	IB]	[dB]		day	night
0+000	386026.567	3768912.709	93.81	-		-	-		-	-
0+329	386204.848	3768677.695	83.88	-	·	-	-		-	-
South10_HSR4		ail track: Direction:		Section: 14	Km: 0+000					
	Train t	type		Number of	f trains	Speed	Length per		Emissio	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	18	3	16	151	yes	64.8	59.5
			0 0	3	1	16	151 203	yes -	57.7	53.7
Track	1	ordinates of track axis	0	3 Track	1 Cu	16 Irve	151 203 Multiple	-	57.7 Corre	53.7 ected
Station	Coo X	ordinates of track axis Y		3 Track type	1 Cu rac	16 Irve dius	151 203 Multiple reflections	-	57.7 Corre Emissio	53.7 ected on level
Station km	Х	Y	0 Z	3 Track	1 Cu rac	16 Irve	151 203 Multiple	-	57.7 Corre	53.7 ected
Station	1	1	0	3 Track type	1 Cu rac [d	16 Irve dius	151 203 Multiple reflections	-	57.7 Corre Emissio	53.7 ected on level

South10_HSR4	R	ail track: Direction:		Section: 15	Kr	ím: 0+000					
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
		51.5		day	l n	night		train	Max	day	night
						Ũ	km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	3	<u> </u>	1	16	203	L -	57.7	53.7
Track	1	ordinates of track axis		Track			rve	Multiple			ected
Station	Х	Y	Z	type			lius	reflections	5		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386044.035	3768914.069	93.78	-		-	-	-		-	-
0+311	386206.171	3768683.692	83.93	-		-	-	-		-	-
South10_HSR4		ail track: Direction:		Section: 16		ím: 0+000					
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
Tract	0		0	3		1	16	203	-	57.7	53.7
Track	1	ordinates of track axis	7	Track			rve	Multiple			ected
Station	Х	Y	Z	type			lius	reflections	5		on level
km	000050.004	0700044.000	00.00	[dB]		[d	-	[dB]		day	night
0+000 0+298	386056.081 386206.171	3768911.282 3768683.692	93.66 83.93	-		-	-	-		-	-
0+296 South10		ail track: Direction:	03.93	Section: 17		m: 0+000	-	-		-	-
3000110							Onesd	L so ath a sa		Enteri	and law all
	Train	туре			of trains		Speed	Length per			on level
				day	n	night	Luce (h	train	Max	day	night
			0	10		2	<u>km/h</u> 16	m 151	1/00	dB(A) 64.8	dB(A)
			0	18 3		3 1	16	151 203	yes -	57.7	59.5 53.7
Track	Cor	ordinates of track axis	0	Track		•	rve	Multiple			ected
Station	X I	Y Y	Z	type			lius	reflections	3		on level
km			_	[dB]		[d		[dB]		day	night
0+000	386062.371	3768915.046	93.73	-		»]		-		-	-
0+289	386209.772	3768691.097	84.02	-		-	-	-		-	-

South10	R	ail track: Direction:		Section: 18	Km:	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	ht	·	train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	3		1	16	203	-	57.7	53.7
Track	Coc	ordinates of track axis		Track		Cur	ve	Multiple		Corr	ected
Station	Х	Y	Z	type		radi	ius	reflections	;	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386072.904	3768910.668	93.58	-		-		-		-	-
0+278	386209.772	3768691.097	84.02	-		-		-		-	-
South10	R	ail track: Direction:		Section: 19	Km:	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	3		1	16	203	-	57.7	53.7
Track	1	ordinates of track axis		Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		radi		reflections	•		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386077.284	3768910.870	89.57	-		-		-		-	-
0+272	386209.772	3768691.097	84.02	-		-		-		-	-
South10		ail track: Direction:		Section: 20		0+000		1			
	Train	type		Number	of trains		Speed	Length per			on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
	•		0	3		1	16	203	-	57.7	53.7
Track	1	ordinates of track axis	-	Track		Cur	-	Multiple			ected
Station	X	Y	Z	type		radi		reflections			on level
km				[dB]		[dE	-	[dB]		day	night
0+000	386088.708	3768906.239	89.41	-		-		-		-	-
0+260	386210.302	3768696.653	84.06	-		-	I	-	ļ	-	-

South10	Ra	ail track: Direction:		Section: 21	Kr	m: 0+000					
	Train t				of trains		Speed	Length per		Emissi	on level
		.)		day	1	night		train	Max	day	night
				,		0	km/h	m		dB(A)	dB(A)
			0	18		3	16	151	-	64.8	59.5
			0	3		1	16	203	-	57.7	53.7
Track	Coo	rdinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type			lius	reflections	5		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386093.644	3768905.678	93.38	-		-	-	-		-	-
0+255	386210.302	3768696.653	84.06	-			-	-		-	-
South10	Ra	ail track: Direction:		Section: 22	Kr	m: 0+000		1	-		
	Train t	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	-	64.8	59.5
-	<u>^</u>	11 A A A A A A	0	3		1	16	203	-	57.7	53.7
Track	1	ordinates of track axis	-	Track		Cu	-	Multiple			ected
Station	X	Y	Z	type			lius	reflections	5		on level
km	000404.070	0700004.004		[dB]		[d		[dB]		day	night
0+000 0+249	386104.970 386210.302	3768904.234 3768696.653	93.32 84.06	-		-	-	-		-	-
South4		ail track: Direction:	04.00	Section: 23		m: 0+000	-	-		-	-
50utn4							Onesd	L south a se		Enteri	e e le cel
	Train t	type			of trains		Speed	Length per			on level
				day	n	night		train	Max	day	night
			0	AE.		0	km/h 32	m 151		dB(A) 66.0	dB(A) 60.7
			0	45 8		8 2	32 32	203	-	59.0	55.0
Track	Coo	rdinates of track axis	0	Track			rve	Multiple			ected
Station	x	Y Y	z	type			lius	reflections	;		on level
km		·	_	[dB]		[d		[dB]		day	night
0+000	386209.772	3768691.097	84.02	-		[u	_	-		-	-
0+128	386333.643	3768659.816	83.82	-				-		-	-
ĺ			·				,				

South2	Ra	ail track: Direction:		Section: 24	Km: 0+0	000				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m	I	dB(A)	dB(A)
			0	89	16		2 151	-	69.0	63.8
			0	17	4		2 203	-	62.0	58.0
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflection	s	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386425.543	3768034.133	80.77	-		-	-		-	-
0+177	386456.132	3767859.838	79.84	-		-	-		-	-
South2	Ra	ail track: Direction:		Section: 25	Km: 0+0	000				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	45	8		2 151	-	66.0	60.7
	-		0	8	2		2 203	-	59.0	55.0
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflection	S	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386333.643	3768659.816	83.82	-		-	-		-	-
0+709	386425.610	3768034.139	80.77	-		· .	-		-	-
South2	Ra	ail track: Direction:		Section: 26	Km: 0+0	000		-		
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	45	8		2 151	-	66.0	60.7
			0	8	2		2 203	-	59.0	55.0
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflection	S	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386334.825	3768663.917	83.82	-		-	-		-	-
0+890	386460.712	3767860.643	79.58	-		-	-		-	-

South4	R	ail track: Direction:		Section: 27	Km:	: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	ht	•	train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	45		8	32	151	-	66.0	60.7
			0	8		2	32	203	-	59.0	55.0
Track	Co	ordinates of track axis		Track		Cur	rve	Multiple		Corre	ected
Station	Х	Y	Z	type		rad	lius	reflections	5	Emissi	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386210.302	3768696.653	84.06	-		-	-	-		-	-
0+129	386334.825	3768663.917	83.82	-		-	-	-		-	-
Loop1	R	ail track: Direction:		Section: 28	Km:	: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	jht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	Со	ordinates of track axis		Track		Cur	rve	Multiple		Corre	ected
Station	Х	Y	Z	type		rad	lius	reflections	5	Emissi	on level
km				[dB]		[dl	В]	[dB]		day	night
0+000	386334.825	3768663.917	83.82	-		-	-			-	-
0+368	386626.714	3768836.135	84.15	-		-	-	-		-	-
South4_HSR2	R	ail track: Direction:		Section: 29	Km:	: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigl	ht	•	train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	45		8	32	151	-	66.0	60.7
			0	8		2	32	203	-	59.0	55.0
Track		ordinates of track axis		Track		Cur	rve	Multiple		Corre	ected
Station	Х	Y	Z	type		rad		reflections	5	Emissi	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386206.171	3768683.692	83.93	-		-		-		-	-
0+969	386457.662	3767878.014	79.69	-		-	-	-		-	-

South4_HSR2	R	ail track: Direction:		Section: 30	Km: 0+0	000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night		·	train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	45	8		32	151	-	66.0	60.7
			0	8	2		32	203	-	59.0	55.0
Track	Co	ordinates of track axis		Track		Curv	ve	Multiple		Corr	ected
Station	Х	Y	Z	type		radiu	us	reflections		Emissi	on level
km				[dB]		[dB	3]	[dB]		day	night
0+000	386204.959	3768679.601	83.89	-		-		-		-	-
0+965	386453.503	3767877.061	79.94	-		-		-		-	-
LAUS_12	R	ail track: Direction:		Section: 31	Km: 0+0	000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15	3		32	151	-	61.2	56.5
			0	3	0		32	203	-	55.0	-
Track		ordinates of track axis		Track		Curv	-	Multiple			ected
Station	Х	Y	Z	type		radiu		reflections		Emissi	on level
km				[dB]		[dB	3]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-		-		-	-
0+457	386093.644	3768905.678	93.38	-		-		-		-	-
LAUS_12	R	ail track: Direction:		Section: 32	Km: 0+0	000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15	3		32	151	-	61.2	56.5
			0	3	0		32	203	-	55.0	-
Track		ordinates of track axis		Track		Curv	ve	Multiple			ected
Station	Х	Y	Z	type		radiu		reflections	;	Emissi	on level
km				[dB]		[dB	3]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-		-		-	-
0+457	386104.970	3768904.234	93.32	-		-		-		-	-

LAUS_12	R	ail track: Direction:		Section: 33	Km: 0	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15	3	3	32	151	-	61.2	56.5
			0	3	(0	32	203	-	55.0	-
Track	Co	ordinates of track axis		Track		Cur	ve	Multiple		Corre	ected
Station	Х	Y	Z	type		radi	us	reflections	5	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+483	386072.904	3768910.668	93.58	-		-		-		-	-
LAUS_12	R	ail track: Direction:		Section: 34	Km: 0	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	nt 🛛		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
			0	3	(0	32	203	-	55.0	-
Track	1	ordinates of track axis		Track		Cur	-	Multiple			ected
Station	Х	Y	Z	type		radi		reflections	5		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+483	386062.371	3768915.046	93.73	-		-		-		-	-
LAUS12_futureHSI		ail track: Direction:		Section: 35	Km: 0	0+000		1			
	Train	type			of trains		Speed	Length per			on level
				day	night	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	32	151	-	61.2	56.5
			0	3	(0	32	203	-	55.0	-
Track	1	ordinates of track axis	7	Track		Cur	-	Multiple			ected
Station	Х	Y	Z	type		radi		reflections	5		on level
km	000056 001	0700044 000		[dB]		[dE		[dB]		day	night
0+000	386056.081	3768911.282	93.66	-		-		-		-	-
0+398	386134.905	3769300.687	91.92	-	l	-	I	-	l	-	-

LAUS_12	R	ail track: Direction:		Section: 36	Km: 0+00	0				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
				·		km/h	m	1	dB(A)	dB(A)
			0	15	3	32	151	-	61.2	56.5
			0	3	0	32	203	-	55.0	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-	-		-	-
0+481	386077.284	3768910.870	89.57	-		-	-	_	-	-
LAUS_12	Ra	ail track: Direction:		Section: 37	Km: 0+00	0	-			
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	15	3	32	151	-	61.2	56.5
Tasala	0	and a state of the state state	0	3	0	32	203	-	55.0	-
Track	1	ordinates of track axis	7	Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	5		on level
km	000470 400	0700004.047	01.00	[dB]		[dB]	[dB]		day	night
0+000 0+483	386178.406 386088.708	3769381.047 3768906.239	91.92 89.41	-		-	-		-	-
0+403 Throat7		ail track: Direction:	09.41	Section: 38	Km: 0+00	-	-		-	-
moat						-	L a sette a se	1	Enteri	a a la cal
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
			0	26		km/h	m 151		dB(A)	dB(A)
			0	26 6	6 0	32 32	151 203		63.6 57.4	59.3
Track	Cor	ordinates of track axis	0	Track		Curve	Multiple		-	ected
Station	X I	Y	Z	type		radius	reflections			on level
km			_	[dB]		[dB]	[dB]		day	night
0+000	386218.875	3769479.511	89.92	-		-	-		-	-
0+427	386528.833	3769712.436	89.92	-		-	-		-	-
1			·							

Throat7	R	ail track: Direction:		Section: 39	Km: 0+00	0				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m	Ī	dB(A)	dB(A)
			0	26	6	32	151	-	63.6	59.3
			0	6	0	32	203	-	57.4	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386218.718	3769479.515	89.92	-		-	-		-	-
0+094	386178.905	3769394.567	91.92	-		-	-		-	-
Throat7	R	ail track: Direction:		Section: 40	Km: 0+00	0		1		
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	26	6	32	151	-	63.6	59.3
	2	11 A A A A A A	0	6	0	32	203	-	57.4	-
Track	1	ordinates of track axis	_	Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-	-		-	-
0+532	386527.929	3769722.157	89.92	-		-	-	_	-	-
Throat7		ail track: Direction:		Section: 41	Km: 0+00	-	1	1		
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
			-			km/h	m		dB(A)	dB(A)
			0	26 6	6 0	32 32	151 203	:	63.6 57.4	59.3
Track	C_	ordinates of track axis	0	5 Track		Curve	Multiple	-		ected
Station	x		z	type		radius	reflections			on level
km	Λ	I	2	[dB]		[dB]	[dB]	,	day	night
0+000	386174.793	3769396.361	89.92	[UD]		[ub] -	[ub]		uay	ingin
0+000	386528.159	3769717.272	89.92 89.92	-		-	-			
0.020		0.00	00.02		I	I			1	1

Loop1	R	ail track: Direction:		Section: 42	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
					Ū	km/h	m		dB(A)	dB(A)
			0	60	0	32	151	-	67.3	-
Track	Cor	ordinates of track axis		Track	Cu	urve	Multiple		Cor	rected
Station	Х	Y	Z	type		dius	reflections		Emiss	ion level
km				[dB]	[0	dB]	[dB]		day	night
0+000	386626.714	3768836.135	84.15	-		-	-		-	-
0+754	386721.490	3769547.532	89.92	-		-	-		-	-
NE_5trk		ail track: Direction:		Section: 43	Km: 0+000					
	Train	type		Number		Speed	Length per			ion level
				day	night		train	Max	day	night
					0	km/h	m		dB(A)	dB(A)
1			0	36 8	8 0	32 32	151 203	-	65.1 58.9	60.7
Track	Cor	ordinates of track axis	Ŭ	Track		urve	Multiple			rected
Station	X	Y	Z	type		dius	reflections			ion level
km				[dB]	[0	dB]	[dB]		day	night
0+000	386528.833	3769712.436	89.92	-		-	-		-	-
0+107	386635.696	3769718.031	91.31	-		-	-		-	-
AmtrakEast, SBL, 2	20% Metrolink N R	ail track: Direction:		Section: 44	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	12	4	32	151	-	60.3	57.7
Track		ordinates of track axis	_	Track		urve	Multiple			rected
Station	Х	Y	Z	type		dius	reflections			ion level
km		0700705 000		[dB]		dB]	[dB]		day	night
0+000 0+309	386603.806 386912.028	3769725.686 3769750.728	89.92 91.91	-		-	-		-	-
Riverside		ail track: Direction:	91.91	Section: 45	Km: 0+000	-	-		-	-
	Train			Number		Speed	Length per		Emiss	ion level
	riani	туре		day	night	Opeeu	train	Мах	day	night
				duy	ingin	km/h	m	Max	dB(A)	dB(A)
Track	Cor	ordinates of track axis		Track	Cı	urve	Multiple			rected
Station	X	Y	Z	type		dius	reflections			ion level
km				[dB]		dB]	[dB]		day	night
0+000	386823.638	3769577.065	89.26	-		-			-	-
		3769718.031	91.31							1

North4	Rail	track: Direction:		Section: 46	Km: 0+000					
	Train typ	0e		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	42	9	32	151	-	65.7	61.3
Track	Coord	inates of track axis		Track	Cu	irve	Multiple		Cor	rected
Station	X	Y	Z	type		dius	reflections			ion level
km				[dB]	[C	IB]	[dB]		day	night
0+000	386592.696	3769724.249	89.92	-		-	-		-	-
0+595	386894.000	3770187.092	91.44	-		-	-		-	-
South5_noHSR	Rail	track: Direction:		Section: 47	Km: 0+000					
	Train typ	0e		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	89	16	32	151	-	69.0	63.8
			0	17	4	32	203	-	62.0	58.0
Track	1	inates of track axis		Track		irve	Multiple			rected
Station	X	Y	Z	type		dius	reflections			ion level
km				[dB]	[C	IB]	[dB]		day	night
0+000	386460.712	3767860.643	79.58	-		-	-		-	-
0+290	386417.138	3768147.017	80.77	-		-	-		-	-
.oop2		track: Direction:		Section: 48	Km: 0+000	1				
	Train typ)e		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	0	32	203	-	64.5	-
Track	1	inates of track axis		Track		irve	Multiple			rected
Station	X	Y	Z	type		dius	reflections			ion level
km				[dB]	[C	IB]	[dB]		day	night
0+000	386630.738	3769696.557	90.55	-		-	-		-	-
0+037	386663.231	3769678.137	90.50	-		-	-		-	-

South5_noHSR	Ra	ail track: Direction:		Section: 49	Km: 0+00	0				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
				,	U	km/h	m	1	dB(A)	dB(A)
			0	89	16	32	151	-	69.0	63.8
			0	17	4	32	203	-	62.0	58.0
Track	Coc	ordinates of track axis		Track		Curve	Multiple		Corr	ected
Station	X	Y	Z	type		radius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386456.132	3767859.838	79.84	-		-	-		-	-
0+177	386425.543	3768034.133	80.77	-		-	-	_	-	-
South5_noHSR		ail track: Direction:		Section: 50	Km: 0+000	-		-		
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	89	16	32	151	-	69.0	63.8
Track	0	udiantes of treats asis	0	17 Track	4	32 Curve	203	-	62.0	58.0
Station	1	rdinates of track axis	7				Multiple	_		ected
	X	Ŷ	Z	type		radius	reflections	5		on level
km 0+000	386425.610	3768034.139	80.77	[dB]		[dB]	[dB]		day	night
0+000	386412.591	3768034.139	80.77	-		-	-		-	
Throat7		ail track: Direction:	00.11	Section: 51	Km: 0+000	า				
moan	Train				of trains	Speed	Length per		Emissi	on level
	Train	lype				Speed	train	Max		1
				day	night	km/h		IVIAX	day dB(A)	night
			0	26	6	32	m 151	-	dB(A) 63.6	dB(A) 59.3
			0	6	0	32	203	-	57.4	-
Track	Coc	rdinates of track axis		Track		Curve	Multiple		-	ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386178.905	3769394.567	91.92	-		-	-		-	-
0+104	386134.905	3769300.687	91.92	-		-	-		-	-

Throat7	R	ail track: Direction:		Section: 52	Km: 0+00	00				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m	1	dB(A)	dB(A)
			0	26	6	32	151	-	63.6	59.3
			0	6	0	32	203	-	57.4	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	3		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-	-		-	-
0+152	386110.318	3769258.991	91.92	-		-	-		-	-
Throat7		ail track: Direction:		Section: 53	Km: 0+00	-		1		
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
			-			km/h	m		dB(A)	dB(A)
			0 0	26 6	6 0	32 32	151 203		63.6 57.4	59.3
Track	Co	ordinates of track axis	0	Track		Curve	Multiple	I -	-	ected
Station	X	Y	z	type		radius	reflections			on level
km	~	•	-	[dB]		[dB]	[dB]	,	day	night
0+000	386207.420	3769444.399	89.92	-		-	-		-	
0+420	386491.280	3769703.788	89.92	-		-	-		-	-
Throat7	R	ail track: Direction:		Section: 54	Km: 0+00	0				•
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	26	6	32	151	-	63.6	59.3
			0	6	0	32	203	-	57.4	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386207.338	3769444.437	89.92	-		-	-		-	-
0+070	386178.406	3769381.047	91.92	-	I	-	-		-	-

LAUS_12	R	ail track: Direction:		Section: 55	Km: 0+0	000				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	3	0	16		-	57.7	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-	-		-	-
0+075	386203.614	3769425.526	89.92	-		-	-		-	-
LAUS_12	R	ail track: Direction:		Section: 56	Km: 0+0	000				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	15	3	16	-	-	64.0	59.3
Tasala	0.		0	6	0	16	203	-	60.1	-
Track	1	ordinates of track axis	-	Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000 0+532	386203.614	3769425.526	89.92	-		-	-		-	-
	386109.172	3768903.494	93.32	-	16.000	-	-		-	-
LAUS_12		ail track: Direction:		Section: 57	Km: 0+0					
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
				45		km/h	m		dB(A)	dB(A)
			0	15 6	3	16 16		-	64.0 60.1	59.3
Track	Co	ordinates of track axis	0	Track	0	Curve	Multiple	-		ected
Station	x		z	type		radius	reflections			on level
km	~	I	2	[dB]		[dB]	[dB]	,	day	night
0+000	386203.614	3769425.526	89.92	[0D]		-	-		-	-
0+532	386121.048	3768901.251	93.10	-		_	_		-	-
		- 1			•	ľ				

LAUS12	Ra	ail track: Direction:		Section: 58	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
					-	km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	3	0	16	203	<u> </u>	57.7	-
Track		ordinates of track axis		Track	-	urve	Multiple			ected
Station	X	Y	Z	type		adius	reflections	5		on level
km				[dB]		dB]	[dB]		day	night
0+000	386044.035	3768914.069	93.78	-		-	-		-	-
0+399	386134.905	3769300.687	91.92	-		-	-		-	-
LAUS12		ail track: Direction:		Section: 59	Km: 0+000	-	1			
1	Train	type		Number	1	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
Track	Coo	ordinates of track axis	0	<u> </u>	0	16 Surve	203 Multiple	-	57.7 Corr	ected
Station	x	Y	z		-	adius	reflections			on level
km	^	r	2	type		dB]	[dB]	•		1
0+000	386039.054	3768912.182	93.75	[dB]		uБj	Įubj		day	night
0+000	386110.318	3769258.991	93.75	-			-		-	-
LAUS12		ail track: Direction:	01.02	Section: 60	Km: 0+000					
	Train			Number		Speed	Length per		Emissi	on level
		31		day	night		train	Max	day	night
					Ū	km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	3	0	16	203	-	57.7	-
Track		ordinates of track axis		Track	-	urve	Multiple			ected
Station	X	Y	Z	type		adius	reflections	5	Emissi	on level
km				[dB]	[dB]	[dB]		day	night
0+000	386110.318	3769258.991	91.92	-		-	-		-	-
0+358	386026.567	3768912.709	93.81	-		-	-		-	-

GoldNB_Reloc	R	ail track: Direction:		Section: 61	I	Km: 0+000					
	Train	type		Number	of trair	าร	Speed	Length per		Emissi	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad		reflections		Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386006.651	3768862.937	91.29	-		-	·	-		-	-
0+853	385999.210	3769650.932	88.37	- -			-	-		-	-
GoldSB_Reloc		ail track: Direction:		Section: 62		Km: 0+000					
	Train	type		Number	1		Speed	Length per			on level
				day		night	lune /le	train	Max	day	night
Track	C	ordinates of track axis		Track		Cu	km/h	m Multiple		dB(A)	dB(A) ected
Station	x		Z				lius	reflections			on level
km	^	ř	Z	type [dB]		lad [d		[dB]			1
0+000	386001.861	3768863.845	89.92	[UB] -		-	D]	[ub] -		day	night -
0+000 0+848	385995.788	3769646.440	88.31	-		-		-		-	-
Loop2		ail track: Direction:		Section: 63		Km: 0+000					
	Train	type		Number	of trair	าร	Speed	Length per		Emissi	on level
				day		night	•	train	Max	day	night
				-		°	km/h	m		dB(A)	dB(A)
			0	30		0	32	203	-	64.5	-
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad	lius	reflections		Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386731.600	3769516.995	89.92	-		-	-	-		-	-
0+053	386722.218	3769569.313	89.92	-			<u> </u>	-		-	-
NE_5trk		ail track: Direction:		Section: 64		Km: 0+000					
	Train	type		Number			Speed	Length per			on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	36 8		8 0	32 32	151 203	-	65.1 58.9	60.7
Track	Coc	ordinates of track axis	0	Track		Cu		Multiple			ected
Station	x	Y	Z	type			lius	reflections			on level
km				[dB]		[d		[dB]		day	night
0+000	386527.929	3769722.157	89.92	-		-	- 1	-		-	-
0+080	386607.050	3769730.723	89.92	-		-	.	-		-	-

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NE_5trk	R	Rail track: Direction:		Section: 65	Km: 0+000	0				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	36	8	32	151	-	65.1	60.7
Track	C.	ordinates of track axis	0	8 Track	0	32	203	-	58.9	ected
Station	X		z			Curve radius	Multiple reflection			on level
km	^	ř	Z	type [dB]		[dB]	[dB]	5		1
0+000	386528.159	3769717.272	89.92	[ub] -		[db] -	[ub] -		day	night
0+065	386592.696	3769717.272	89.92 89.92	-		-	-		-	-
North4		Rail track: Direction:	00.02	Section: 66	Km: 0+000	<u>ີ</u>				
	Train				of trains	Speed	Length per	<u> </u>	Emissi	on level
	ITall	()po		day	night	Opedu	train	Max	day	night
				uay	night	km/h	m	Wax	dB(A)	dB(A)
			0	42	9	32	151	-	65.7	61.3
Track	Со	ordinates of track axis	<u> </u>	Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflection			on level
km				[dB]		[dB]	[dB]		day	night
0+000	386607.050	3769730.723	89.92	-		-	-		-	-
0+573	386889.616	3770188.510	91.44	-		-	-		-	-
Throat7	R	Rail track: Direction:		Section: 67	Km: 0+000	0				
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	26	6	32	151	yes	63.6	59.3
Track	Co	ordinates of track axis	0	6 Track	0	32 Curve	203 Multiple	-	57.4	ected
Station	X		z	type		radius	reflection			on level
km	^	I	2	[dB]		[dB]	[dB]	5	day	night
0+000	386203.614	3769425.526	89.92	[db] -		-	[0D]		- uay	-
	000200.011	0100120.020	00.02		I	I			I	1
										1/9/2020

Throat7	R	ail track: Direction:		Section: 68	Km.	0+221					
moati	Train				of trains	0+221	Speed	Length per		Emissi	on level
	- Tour	()po		day	nigh	ht	Opoou	train	Max	day	night
				uuy	l ing.		km/h	m	max	dB(A)	dB(A)
			0	26		6	32	151	-	63.6	59.3
			0	6		0	32	203	-	57.4	-
Track	Co	ordinates of track axis		Track		Cur	ve	Multiple		Corre	ected
Station	Х	Y	Z	type		radi	us	reflections	5	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+221	386300.889	3769623.792	89.92	-		-		-		-	-
0+436	386493.600	3769699.206	89.92	-		-		-		-	-
Loop2_Horn	R	ail track: Direction:		Section: 69	Km:	0+030					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		0	32	203	-	64.5	-
Track	Co	ordinates of track axis		Track		Cur	ve	Multiple		Corre	ected
Station	Х	Y	Z	type		radi	us	reflections	5	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+030	386663.160	3769662.289	90.02	-		-		-		-	-
0+074	386625.852	3769686.136	90.11	-		-		-		-	-
ThroatExit_S_W of	f River w Horn R	ail track: Direction:		Section: 70	Km:	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	13		0	32	203	yes	77.9	-
Track	1	ordinates of track axis		Track		Cur		Multiple			ected
Station	Х	Y	Z	type		radi	us	reflections	5	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386625.852	3769686.136	90.11	-		-		-		-	-
0+098	386530.357	3769701.484	89.92	-		-		-		-	-

ThroatExit_S_W of		ail track: Direction:		Section: 71	Km: 0+000	1	1			
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
				10		km/h	m		dB(A)	dB(A)
Treat	0	and a star of the star star	0	13	0	32	203	yes	77.9	
Track	1	ordinates of track axis	7	Track		irve	Multiple			ected
Station	Х	Y	Z	type		suit	reflections	,		on level
km 0+000	386663.431	3769678.014	90.52	[dB]		IB]	[dB]		day -	night
0+000	386722.216	3769569.318	90.52 89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 72	Km: 0+000	I				
	Train			Number		Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
					0	km/h	m		dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track	Coo	ordinates of track axis		Track	Cu	irve	Multiple		Corr	ected
Station	Х	Y	Z	type	rac	lius	reflections	;	Emissi	on level
km				[dB]	[c	IB]	[dB]		day	night
0+000	386715.203	89.92	-		-	-		-	-	
0+061	386689.207	3769634.305	90.24	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 73						
	Train	type		Number	of traina	Speed	Length per		Emicoi	and farmed
		-71		Number	ortrains	Opecu			EIIIISSI	on level
		.)		day	night		train	Max	day	night
				day	night	km/h	train m		day dB(A)	night dB(A)
			0	day 13	night 0	km/h 32	train m 203	Max yes	day dB(A) 77.9	night dB(A) -
Track	Cor	ordinates of track axis	-	day 13 Track	night 0 Cu	km/h 32 Irve	train m 203 Multiple	yes	day dB(A) 77.9 Corr	night dB(A) - ected
Station			0 Z	day <u>13</u> Track type	night 0 Cu rac	km/h 32 Irve Jius	train m 203 Multiple reflections	yes	day dB(A) 77.9 Corr Emissi	night dB(A) ected on level
Station km	Coo X	ordinates of track axis Y	z	day <u>13</u> Track type [dB]	night 0 Cu rac	km/h 32 live lius B]	train m 203 Multiple	yes	day dB(A) 77.9 Corr	night dB(A) - ected
Station km 0+000	Coo X 386530.098	ordinates of track axis Y 3769706.166	Z 89.92	day <u>13</u> Track type	night 0 Cu rac	km/h 32 Irve Jius	train m 203 Multiple reflections	yes	day dB(A) 77.9 Corr Emissi	night dB(A) ected on level
Station km 0+000 0+102	Coc X 386530.098 386630.738	ordinates of track axis Y 3769706.166 3769696.557	z	day <u>13</u> Track type [dB] -	night 0 Cu rac	km/h 32 live lius B]	train m 203 Multiple reflections	yes	day dB(A) 77.9 Corr Emissi day	night dB(A) ected on level
Station km 0+000	Coo X 386530.098 386630.738 f River w Horn R	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction:	Z 89.92	day 13 Track type [dB] - Section: 74	night 0 Cu rac [c	km/h 32 Irve Jius IB] -	train m 203 Multiple reflections [dB] -	yes	day dB(A) 77.9 Corr Emissi day - -	night dB(A) - ected on level night - -
Station km 0+000 0+102	Coc X 386530.098 386630.738	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction:	Z 89.92	day 13 Track type [dB] - - Section: 74 Number	night 0 Cu rac [c Km: 0+000 of trains	km/h 32 live lius B]	train m 203 Multiple reflections [dB] - - Length per	yes	day dB(A) 77.9 Corr Emissi day - - Emissi	night dB(A) - ected on level - - - -
Station km 0+000 0+102	Coo X 386530.098 386630.738 f River w Horn R	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction:	Z 89.92	day 13 Track type [dB] - Section: 74	night 0 Cu rac [c	km/h 32 Irve Jius IB] - Speed	train m 203 Multiple reflections [dB]	yes	day dB(A) 77.9 Corr Emissi day - - Emissi day	night dB(A) - ected on level night - - on level night
Station km 0+000 0+102	Coo X 386530.098 386630.738 f River w Horn R	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction:	Z 89.92	day 13 Track type [dB] - - Section: 74 Number	night 0 Cu rac [c Km: 0+000 of trains	km/h 32 Irve Jius IB] -	train m 203 Multiple reflections [dB] - - Length per	yes	day dB(A) 77.9 Corr Emissi day - - Emissi	night dB(A) - ected on level - - - -
Station km 0+000 0+102	Coc X 386530.098 386630.738 f River w Horn R: Train	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction:	Z 89.92 90.55	day 13 Track type [dB] - - Section: 74 Number day	night 0 Cu rac [c Km: 0+000 of trains night 0	km/h 32 Irve Jius IB] - - Speed km/h	train m 203 Multiple reflections [dB] - - - Length per train m	yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9	night dB(A) - ected on level night - on level night dB(A)
Station km 0+000 0+102 ThroatExit_S_W of	Coc X 386530.098 386630.738 f River w Horn R: Train	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction: type	Z 89.92 90.55	day 13 Track type [dB] - Section: 74 Number day 13	night 0 Cu rac [c Km: 0+000 of trains night 0 Cu	km/h 32 Irve Jius B] Speed km/h 32	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr	night dB(A) - ected on level night - - on level night dB(A)
Station km 0+000 0+102 ThroatExit_S_W of Track	Cor X 386530.098 386630.738 f River w Horn R: Train	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction: type	Z 89.92 90.55	day 13 Track type [dB] - - Section: 74 Number day 13 Track	night 0 Cu rac [c Km: 0+000 of trains night 0 Cu rac	km/h 32 lius B] Speed km/h 32 Irve	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr	night dB(A) - ected on level night - - on level night dB(A) - ected
Station km 0+000 0+102 ThroatExit_S_W of Track Station km 0+000	Coc X 386530.098 386630.738 f River w Horn R: Train Coc X X 386491.286	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction: type ordinates of track axis Y 3769703.728	Z 89.92 90.55 0 Z 89.92	day 13 Track type [dB] Section: 74 Number day 13 Track type	night 0 Cu rac [c [c Km: 0+000 of trains night 0 Cu rac	km/h 32 Irve Jius B] Speed km/h 32 Irve Jius	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr Emissi	night dB(A) - ected on level - - on level night dB(A) - ected on level
Station km 0+000 0+102 ThroatExit_S_W of Track Station km	Cor X 386530.098 386630.738 f River w Horn R: Train Train Cor X	ordinates of track axis Y 3769706.166 3769696.557 ail track: Direction: type ordinates of track axis Y	Z 89.92 90.55 0 Z	day 13 Track type [dB] 	night 0 Cu rac [c Km: 0+000 of trains night 0 Cu rac 1 Cu cu cu cu cu cu cu cu cu cu c	km/h 32 irve jius B] Speed km/h 32 irve jius B]	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emissi day - Emissi day dB(A) 77.9 Corr Emissi	night dB(A) - ected on level - - on level night dB(A) - ected on level

ThroatExit_S_W of	f River w Horn R	ail track: Direction:		Section: 75	Kr	m: 0+000					
	Train				r of trains		Speed	Length per		Emissi	on level
	Train	type		day	1	, night	opeed	train	Max	day	night
				uuy			km/h	m	incast	dB(A)	dB(A)
			0	13		0	32	203	yes	77.9	-
Track	Co	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	X	Y	Z	type		rad	lius	reflections	;	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386530.357	3769701.484	89.92	-			-	-		-	-
0+037	386493.600	3769699.206	89.92	-			-	-		-	-
ThroatExit_S_W of	River w Horn R	ail track: Direction:		Section: 76	Kr	m: 0+000		1	-		
	Train	type		Number	of trains	;	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
-	2		0	13		0	32	203	yes	77.9	-
Track	1	ordinates of track axis	-	Track			rve	Multiple			ected
Station	Х	Y	Z	type			lius	reflections			on level
km	000704 404	0700547.005		[dB]		[d	B]	[dB]		day	night
0+000 0+032	386721.464 386715.197	3769547.605 3769579.095	89.92 89.92	-			-	-		-	-
ThroatExit_S_W of		ail track: Direction:	09.92	Section: 77	Kr	m: 0+000					-
	Train			Number	Number of trains Speed Length per					Emissi	on level
		-71		day	1	night		train	Max	day	night
				, in the second s		0	km/h	m		dB(A)	dB(A)
			0	13		0	32	203	yes	77.9	-
Track	Co	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad	lius	reflections	;	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386689.207	3769634.305	90.24	-			-	-		-	-
0+038	386663.062	3769662.269	90.04	-			-	-		-	-
Ventura, LOSSAN,		ail track: Direction:		Section: 78		m: 0+000					
	Train	type			r of trains		Speed	Length per			on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Tuest	^		0	84		18	32	151	yes	86.0	81.5
Track	1	ordinates of track axis	7	Track			rve	Multiple			ected
Station	Х	Y	Z	type			lius	reflections			on level
km	000000 000	0770407.000	00.01	[dB]		-	B]	[dB]		day	night
0+000 0+333	386893.999 386973.752	3770187.096 3770507.725	90.81	-			-	-		-	-
0+353	300913.132	5110501.125	-	-				-		-	-

Ventura, LOSSAN,	Coast Starlight 1 R	ail track: Direction:		Section: 79	Km:	: 0+000					
	Train				of trains	. 01000	Speed	Length per		Emissi	on level
	IIdiii	туре		day	nig	thr	Speed	train	Мах	day	night
				uay	l ing	Jin	km/h	m	IVIAN	dB(A)	dB(A)
			0	84		18	32	151	ves	86.0	81.5
Track	Со	ordinates of track axis		Track		Cu		Multiple			ected
Station	х	Y	Z	type		rad	ius	reflections	5		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386889.614	3770188.507	91.05	-		-		-		-	-
0+331	386966.343	3770506.879	-	-		-		-		-	-
ThroatExit_S_W of	f River R	ail track: Direction:		Section: 80	Km:	: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	17		0	32	203	yes	62.0	-
Track		ordinates of track axis	_	Track		Cu	-	Multiple			ected
Station	Х	Y	Z	type		rad		reflections	5		on level
km				[dB]		[dl	-	[dB]		day	night
0+000 0+098	386625.852 386530.357	3769686.136 3769701.484	90.11 89.92	-		-		-		-	-
ThroatExit_S_W of		ail track: Direction:	69.92	Section: 81	Km [.]	: 0+000	<u> </u>	-		-	-
	Train				of trains		Speed	Length per		Emissi	on level
	Truin	type		day	nig	nht	Opeed	train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	17	-	0	32	203	yes	62.0	-
Track	Со	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad	ius	reflections	;	Emissi	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386663.431	3769678.014	90.52	-		-		-		-	-
0+127	386722.216	3769569.318	89.92	-				-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 82		: 0+000		1			
	Train	type			of trains		Speed	Length per			on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	0.	andination of the slope is	0	<u>17</u>		0	32	203	yes	62.0	-
Track		ordinates of track axis	7	Track		Cui	-	Multiple			ected
Station	Х	Y	Z	type		rad		reflections	5		on level
km	000745 000	0700570 000	00.00	[dB]		[dl	-	[dB]		day	night
0+000 0+061	386715.203 386689.207	3769579.068 3769634.305	89.92 90.24	-		-		-		-	-
01001	000000.201	0700004.000	50.24					-		-	

ThroatExit_S_W of		ail track: Direction:		Section: 83	Km: 0+00	0	1			
	Train t	type		Number	of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	17	0	32	203	yes	62.0	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	3		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386530.098	3769706.166	89.92	-		-	-		-	-
0+102	386630.738	3769696.557	90.55	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 84	Km: 0+00					
	Train t	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
			-		-	km/h	m		dB(A)	dB(A)
	0		0	17	0	32	203	yes	62.0	
Track		ordinates of track axis	-	Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000 0+039	386491.286 386530.098	3769703.728 3769706.166	89.92 89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:	09.92	Section: 85	Km: 0+00		-		-	-
						-	Longth non		E min ai	en level
	Train t	уре			of trains	Speed	Length per	Max		on level
				day	night	have the	train	Max	day	night
			0	17	0	km/h 32	m 203	ves	dB(A) 62.0	dB(A)
Track	Coo	rdinates of track axis	0	Track		Curve	Multiple	yes		ected
Station	X I		z	type		radius	reflections			on level
km	~	1	2	[dB]		[dB]	[dB]	>	day	night
0+000	386530.357	3769701.484	89.92	[0D]		-	[UD] -		uay	
0+037	386493.600	3769699.206	89.92	-		_	_		-	_
ThroatExit_S_W of		ail track: Direction:		Section: 86	Km: 0+00	0				•
	Train t				of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	17	0	32	203	yes	62.0	-
Track	Coo	ordinates of track axis		Track		Curve	Multiple		Corr	ected
Station	X	Y	Z	type		radius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386721.464	3769547.605	89.92	-		-			-	-
0+032	386715.197	3769579.095	89.92	-		-	-		-	-

ThroatExit_S_W of	f River R	ail track: Direction:		Section: 87	K	Km: 0+000					
	Train	type		Number	of train	IS	Speed	Length per		Emissi	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		0	32	203	yes	64.5	-
Track	Co	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad		reflections	6	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386689.207	3769634.305	90.24	-		-	-	-		-	-
0+038	386663.062	3769662.269	90.04	-			-	-		-	-
HSR_2trk_West of	NW Merge with SBL/AnR	ail track: Direction:		Section: 88		(m: 0+272		1			
	Train	type		Number			Speed	Length per		Emissi	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	36		8	32	151	yes	65.1	60.7
1	0		0	8	<u> </u>	0	32	203	-	58.9	
Track		ordinates of track axis	_	Track		Cu		Multiple			ected
Station	Х	Y	Z	type		rad		reflections	6		on level
km				[dB]		[d		[dB]		day	night
0+272 0+355	386606.968 386524.324	3769742.417	89.89	-		-		-		-	-
	NW Merge with SBL/AnR	3769733.414 ail track: Direction:	89.89	Section: 89		(m: 0+237	-	-		-	-
							Creed	L an ath man		Eminei	en level
	Train	туре		Number	1		Speed	Length per	Mari		on level
				day		night	Luce (h	train	Max	day	night
			0	36		8	km/h 32	m 151	1/00	dB(A) 65.1	dB(A) 60.7
			0	8		0	32	203	yes	58.9	
Track	Со	ordinates of track axis		Track		Cu		Multiple			ected
Station	Х	Y	Z	type		rad		reflections	6		on level
km			_	[dB]		[d		[dB]		day	night
0+237	386606.048	3769737.832	90.09	-				-		-	-
0+323	386520.669	3769727.961	89.92	-		-	-	-		-	-
											1/9/2020

LAUS_12	R	ail track: Direction:		Section: 1	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
				·		km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	5	0	16	203	-	59.2	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-	-		-	-
0+457	386093.644	3768905.678	93.38	-		-	-		-	-
LAUS_12	Ra	ail track: Direction:		Section: 2	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	5	0	16	203	-	59.2	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-	-		-	-
0+457	386104.970	3768904.234	93.32	-		-	-		-	-
LAUS_12	Ra	ail track: Direction:		Section: 3	Km: 0+000)	1			
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	5	0	16	203	-	59.2	
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-	-		-	-
0+483	386072.904	3768910.668	93.58	-		-	-		-	-

LAUS_12	Ra	ail track: Direction:		Section: 4	Km	n: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
						-	km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	5		0	16	203	-	59.2	-
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple		Corre	ected
Station	Х	Y	Z	type		rad	lius	reflections	6	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-	-	-		-	-
0+483	386062.371	3768915.046	93.73	-		-	<u> </u>	-		-	-
LAUS12_futureHS	R4 Ra	ail track: Direction:		Section: 5	Km	n: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	5		0	16	203	-	59.2	-
			0	32		5	16	175	-	49.3	43.5
Track		ordinates of track axis	_	Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections	5	Emissi	1
km				[dB]		[d	B]	[dB]		day	night
0+000	386056.081	3768911.282	93.66	-		-	-	-		-	-
0+398	386134.905	3769300.687	91.92	-			·	-		-	-
LAUS_12		ail track: Direction:		Section: 6		n: 0+000		1			
	Train	type			of trains		Speed	Length per			on level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
Tanala		and a star of the star of the	0	5		0	16	203	-	59.2	-
Track	1	ordinates of track axis	7	Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	3		on level
km				[dB]		[d	-	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-	-	-		-	-
0+481	386077.284	3768910.870	89.57	-	I	-	-	-		-	-

LAUS_12	R	ail track: Direction:		Section: 7	Km: (0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
		<i></i>		day	night	nt	·	train	Max	day	night
				·			km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	5		0	16	203	-	59.2	-
Track	Co	ordinates of track axis		Track		Cur	ve	Multiple		Corr	ected
Station	Х	Y	Z	type		radi		reflections	;	Emissi	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+483	386088.708	3768906.239	89.41	-		-		-		-	-
Throat6	R	ail track: Direction:		Section: 8	Km: (0+000		1			
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	nt 🛛		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		7	32	151	-	64.3	60.0
			0	9		0	32	203	-	59.5	-
Track	1	ordinates of track axis		Track		Cur	-	Multiple			ected
Station	Х	Y	Z	type		radi		reflections	•		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386218.875	3769479.511	89.92	-		-		-		-	-
0+427	386528.833	3769712.436	89.92	-		-		-		-	-
Throat6		ail track: Direction:		Section: 9		0+000					
	Train	type		Number	of trains		Speed	Length per			on level
				day	night	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		7	32	151	-	64.3	60.0
			0	9		0	32	203	-	59.5	-
Track	1	ordinates of track axis	-	Track		Cur	-	Multiple			ected
Station	Х	Y	Z	type		radi		reflections			on level
km				[dB]		[dE	-	[dB]		day	night
0+000	386218.718	3769479.515	89.92	-		-		-		-	-
0+094	386178.905	3769394.567	91.92	-		-		-		-	-

Throat6	Ra	ail track: Direction:		Section: 10	Kı	m: 0+000					
	Train t	type		Number	of trains	5	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
						-	km/h	m		dB(A)	dB(A)
			0	30		7	32	151	-	64.3	60.0
			0	9		0	32	203	-	59.5	-
	-		0	64		10	32	175	-	55.0	49.2
Track	1	ordinates of track axis	_	Track		Cu	-	Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-	.	-		-	-
0+532	386527.929	3769722.157	89.92	-		-	·	-		-	-
Throat6		ail track: Direction:		Section: 11		m: 0+000		I			
	Train t	type			of trains		Speed	Length per			on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30 9		7 0	32 32	151 203	-	64.3 59.5	60.0
Track	Coo	ordinates of track axis	0	Track		U Cu		Multiple	-		ected
Station	x		z	type		rad	-	reflections			on level
km	~	1	2	[dB]		[d		[dB]	,	day	night
0+000	386174.793	3769396.361	89.92	[0D]		Įu.	-	[db]		uay	nign
0+000	386528.159	3769717.272	89.92	-		-		-		-	-
Loop1	l	ail track: Direction:		Section: 12	Kı	m: 0+000	<u>L</u>				1
	Train t	type		Number	of trains	5	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
						-	km/h	m		dB(A)	dB(A)
			0	60		0	32	151	-	67.3	-
Track	Coo	rdinates of track axis		Track		Cu	rve	Multiple		Corre	ected
Station	X	Y	Z	type		rad	ius	reflections	5	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386626.714	3768836.135	84.15	-		-		-		-	-
0+754	386721.490	3769547.532	89.92	-		-	.	-		-	-
1											

NE_4trk	D	ail track: Direction:		Section: 13	K	(m: 0+000					
				Number			Speed	Longth por		Emioni	
	Train	туре		day	1	s night	Speed	Length per train	Мах	day	on level
				uay		Ingin	km/h	m	IVIAX	dB(A)	dB(A)
			0	45		10	32	151	-	66.0	61.7
			0 0	14		0	32	203	-	61.3	-
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad	lius	reflections		Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386528.833	3769712.436	89.92	-		-	-	-		-	-
0+107	386635.696	3769718.031	91.31	-			-	-		-	-
AmtrakEast, SBL, 2		ail track: Direction:		Section: 14		(m: 0+000					
	Train	type		Number	1		Speed	Length per			on level
				day	r	night		train	Max	day	night
				400		10	km/h	m		dB(A)	dB(A)
Track	Coo	urdinates of track avia	0	180 Track		40 Cu	32	151 Multiple	-	72.0	67.7 ected
Station	x	ordinates of track axis	z					reflections			on level
km	^	T	2	type [dB]		rad [d		[dB]		day	1
0+000	386603.806	3769725.686	89.92	[UB] -			- Dj	[dB]		uay -	night
0+000	386912.028	3769750.728	91.91	-				-		-	-
Riverside		ail track: Direction:		Section: 15	К	(m: 0+000					1
	Train			Number			Speed	Length per		Emissi	on level
		31		day	1	night		train	Max	day	night
				,		5	km/h	m		dB(A)	dB(A)
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple			ected
Station	Х	Y	Z	type		rad	lius	reflections		Emissi	on level
km				[dB]		[d	вј 👘	[dB]		day	night
0+000	386823.638	3769577.065	89.26	-			-	-		-	-
0+256	386635.696	3769718.031	91.31	-			-	-		-	-
North3	Ra	ail track: Direction:		Section: 16	K	(m: 0+000					
	Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	64		10	32	175	-	55.0	49.2
Track	1	ordinates of track axis	_	Track		Cu		Multiple			ected
Station	X	Y	Z	type			lius	reflections			on level
km	000500.000	0700704.045		[dB]		[d	-	[dB]		day	night
0+000 0+595	386592.696 386894.000	3769724.249 3770187.092	89.92 91.44	-		-	-	-		-	-
0+090	300094.000	5170107.092	91.44	-			-	-		-	-

		Rail track: Direction:		Section: 17		0+000					
	Train	type		Number	1		Speed	Length per			on level
				day	nigh	nt		train	Max	day	night
			-				km/h	m		dB(A)	dB(A)
			0	89		16	32	151	-	69.0	63.8
Track	C.	oordinates of track axis	0	30 Track		14 Curv	32	203 Multiple	-	64.5 Corr	63.4 ected
Station	X X		z	type		radiu		reflections			on level
km	^	· ·	2	[dB]		[dB		[dB]	•	day	night
0+000	386460.712	3767860.643	79.58	[ub] -			·]	[0D]		- uay	-
0+290	386417.138	3768147.017	80.77	-		_		_		-	_
oop2		Rail track: Direction:		Section: 18	Km:	0+000	<u>,</u>			•	
	Train	i type		Number	of trains		Speed	Length per		Emiss	on level
				day	nigh	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		0	32	203	-	64.5	-
Track		ordinates of track axis		Track		Curv		Multiple			ected
Station	Х	Y	Z	type		radiu		reflections	;	Emiss	on level
km				[dB]		[dB	5]	[dB]		day	night
0+000 0+037	386630.738 386663.231	3769696.557 3769678.137	90.55 90.50	-		-		-		-	-
outh5_noHSR	•	Rail track: Direction:	90.50	Section: 19	Km.	- 0+000		-		-	-
	Train			Number			Speed	Length per		Emiss	on level
	1 and	()po		day	nigh	nt I	opood	train	Max	day	night
				uay			km/h	m		dB(A)	dB(A)
			0	89	1	16	32	151	-	69.0	63.8
			0	30	1	14	32	203	-	64.5	63.4
Track		ordinates of track axis		Track		Curv		Multiple			ected
Station	Х	Y	Z	type		radiu		reflections	;	Emiss	on level
Luna				[dB]		[dB	5]	[dB]		day	night
km		3767859.838	79.84	-		-		-		-	-
кт 0+000 0+177	386456.132 386425.543		80.77	-							

South5_noHSR	R	ail track: Direction:		Section: 20	Km: 0	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	t		train	Max	day	night
						Ī	km/h	m		dB(A)	dB(A)
			0	89	16	6	32	151	-	69.0	63.8
			0	30	14		32	203	-	64.5	63.4
Track	Co	ordinates of track axis		Track		Cur	rve	Multiple			ected
Station	Х	Y	Z	type		rad	lius	reflections	6	Emissi	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386425.610	3768034.139	80.77	-		-	-	-		-	-
0+116	386412.591	3768149.464	80.77	-		-	-	-		-	-
Throa6	R	ail track: Direction:		Section: 21	Km: 0	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	t	•	train	Max	day	night
				,			km/h	m		dB(Å)	dB(A)
			0	30	-	7	32	151	-	64.3	60.0
			0	9		0	32	203	-	59.5	-
			0	64	10	0	32	175	-	55.0	49.2
Track	Co	ordinates of track axis		Track		Cur	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad	lius	reflections	6	Emissi	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386178.905	3769394.567	91.92	-		-	-	-		-	-
0+104	386134.905	3769300.687	91.92	-		-	-	-		-	-
Throat6	R	ail track: Direction:		Section: 22	Km: 0	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	t		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30	-	7	32	151	-	64.3	60.0
			0	9		0	32	203	-	59.5	
			0	64	1(32	175	-	55.0	49.2
Track	Co	ordinates of track axis		Track		Cur	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad		reflections	5	Emissi	on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-		-		-	-
0+152	386110.318	3769258.991	91.92	-		-	.	-		-	-

Throat6	R	ail track: Direction:		Section: 23	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
				·		km/h	m		dB(A)	dB(A)
			0	30	7	32	151	-	64.3	60.0
			0	9	0	32	203	-	59.5	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type	1	radius	reflections	3		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386207.420	3769444.399	89.92	-		-	-		-	-
0+420	386491.280	3769703.788	89.92	-		-	-		-	-
Throat6		ail track: Direction:		Section: 24	Km: 0+000		-			
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	7	32	151	-	64.3	60.0
Track	Cov	ordinates of track axis	0	9 Track	0	32 Curve	203 Multiple	-	59.5 Corr	ected
Station	x		z			radius	reflections			on level
km	^	r	2	type				5		1
0+000	386207.338	3769444.437	89.92	[dB]		[dB]	[dB]		day	night
0+000	386178.406	3769381.047	91.92 91.92	-		-	-		-	-
LAUS_12		ail track: Direction:	01.02	Section: 25	Km: 0+000)				
	Train				of trains	Speed	Length per		Emissi	on level
		51 -		day	night		train	Max	day	night
					J	km/h	m		dB(A)	dB(A)
			0	15	3	16	151	-	64.0	59.3
			0	5	0	16	203	-	59.2	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type	1	radius	reflections	3	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-	-		-	
0+075	386203.614	3769425.526	89.92	-		-	-		-	-

LAUS_12	R	ail track: Direction:		Section: 26	Km: (0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
	-		0	5		0	16	203	-	59.2	-
Track	1	ordinates of track axis	_	Track		Cur		Multiple			ected
Station	Х	Y	Z	type		radi		reflections	5		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-		-		-	-
0+532	386109.172	3768903.494	93.32	-		-		-		-	-
LAUS_12		ail track: Direction:		Section: 27		0+000					
	Train	type			of trains		Speed	Length per			on level
				day	nigh	ht		train	Max	day	night
				·-		-	km/h	m		dB(A)	dB(A)
			0	15 5		3 0	16 16	151 203	-	64.0 59.2	59.3
Track	Co	ordinates of track axis	0	Track		Cur		Multiple			ected
Station	x		z	type		radi		reflections			on level
km	A	•	2	[dB]		[dE		[dB]	,	day	night
0+000	386203.614	3769425.526	89.92	-				[00]		-	-
0+532	386121.048	3768901.251	93.10	_		-		_		-	-
LAUS12		ail track: Direction:		Section: 28	Km: (0+000					1
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15	1	3	16	151	-	64.0	59.3
			0	5		0	16	203	-	59.2	-
Track	Car	ordinates of track axis	0	32 Track		5 Cur	16	175 Multiple	-	49.3	43.5 ected
Station	x	Y	z				-	•			
	^	r	Z	type		radi		reflections	, ,		on level
km	206044.025	3768914.069	02.70	[dB]		[dE		[dB]		day	night
0+000 0+399	386044.035 386134.905	3769300.687	93.78 91.92	-		-		-		-	-
0.000	000104.000	0100000.001	01.02		I		I		I		1
1											

LAUS12		ail track: Direction:		Section: 29		0+000					
	Train	type		Number	of trains		Speed	Length per		Emissio	on level
				day	night	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	5 32		0 5	16 16	203 175	-	59.2 49.3	- 43.5
Track	Cor	ordinates of track axis	0	32 Track	<u> </u>	5 Cur	_	Multiple	-	49.3 Corre	
Station	x		Z	type		radi	-	reflections		Emissio	
km	Λ	1	2	[dB]		[dE		[dB]	,	day	night
0+000	386039.054	3768912.182	93.75	-	-	-	-	-		-	
0+354	386110.318	3769258.991	91.92	-		-		-		-	-
LAUS12	R	ail track: Direction:		Section: 30	Km: C	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissio	on level
				day	night	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	15		3	16	151	-	64.0	59.3
			0	5		0	16	203	-	59.2	-
Track	Cor	ordinates of track axis	0	32 Track		5 Cur	16	175 Multiple	-	49.3 Corre	43.5
Station	x		z			radi		reflections		Emissio	
km	^	I	2	type [dB]		[dE		[dB]		day	night
0+000	386110.318	3769258.991	91.92	[UD] -		- [UL	-	[ub] -		uay -	-
0+000	386026.567	3768912.709	93.81	-		_		-		-	-
GoldNB_Reloc		ail track: Direction:	00101	Section: 31	Km: C	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissio	on level
				day	night	nt		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	Coc	ordinates of track axis		Track		Cur	ve	Multiple		Corre	ected
Station	X	Y	Z	type		radi	us	reflections	;	Emissio	on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386006.651	3768862.937	91.29	-		-		-		-	-
0+853	385999.210	3769650.932	88.37	-		-		-		-	-
1											

GoldSB_Reloc	R	ail track: Direction:		Section: 32	K	(m: 0+000					
	Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	Coc	ordinates of track axis		Track		Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type		rad	lius	reflections	6	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386001.861	3768863.845	89.92	-			-	-		-	-
0+848	385995.788	3769646.440	88.31	<u> </u>				-		-	-
Loop2	R	ail track: Direction:		Section: 33	K	(m: 0+000		1			
	Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	r	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	30		0	32	203	-	64.5	-
Track	1	ordinates of track axis		Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections	6		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386731.600	3769516.995	89.92	-			-	-		-	-
0+053	386722.218	3769569.313	89.92	-			-	-		-	-
NE_4trk		ail track: Direction:		Section: 34		(m: 0+000					
	Train	type		Number	1		Speed	Length per			on level
				day	r	night		train	Max	day	night
			-			- 10	km/h	m		dB(A)	dB(A)
			0	45 14		10 0	32 32	151 203	-	66.0 61.3	61.7
Track	Cor	ordinates of track axis	0	Track	I	Cu		Multiple	-		ected
Station	x		z	type		rad		reflections			on level
km	~	I	2	[dB]		lac [d		[dB]	2	day	night
0+000	386527.929	3769722.157	89.92	[UD] -		[u		[00]		uay	
0+000	386607.050	3769730.723	89.92	_				_		-	_
					1		I			1	

NE_4trk	R	ail track: Direction:		Section: 35	Km: 0+000	0			-	
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	45	10	32	151	-	66.0	61.7
- · ·	-	11 / / 1 /	0	14	0	32	203	-	61.3	-
Track	1	ordinates of track axis	-	Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000 0+065	386528.159 386592.696	3769717.272 3769724.249	89.92 89.92	-		-	-		-	-
North2			89.92	-		- -	-		-	-
ΝοπηΖ		ail track: Direction:		Section: 36	Km: 0+000			-		
	Train	type			of trains	Speed	Length per			on level
				day	night	, ,	train	Max	day	night
				04	40	km/h	m		dB(A)	dB(A)
Trool	0	ordinaton of track ovia	0	64 Track	10	- Curve	175 Multiple	-	50.8	45.0 ected
Track Station	x	ordinates of track axis Y	Z			radius	reflections			on level
	^	r	2	type [dB]		[dB]	[dB]	5		1
km 0+000	386607.050	3769730.723	80.02	[ub] -		- -	[UD] -		day	night -
0+573	386807.050	3769730.723	89.92 91.44	-		-	-		-	-
Throat6		ail track: Direction:	01.44	Section: 37	Km: 0+000				<u> </u>	1
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	7	32	151	yes	64.3	60.0
			0	9	0	32	203	-	59.5	
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-	-		-	-
01000	000200.014	0100420.020	00.02			I			I	I
										1/9/202

Throat6	Rail	I track: Direction:		Section: 38	K	(m: 0+221					
	Train ty	rpe		Number	of trains	S	Speed	Length per		Emissi	on level
				day	1	night		train	Max	day	night
						-	km/h	m		dB(A)	dB(A)
			0	30		7	32	151	-	64.3	60.0
			0	9		0	32	203	-	59.5	-
Track	Coord	dinates of track axis		Track		Cu	rve	Multiple			ected
Station	X	Y	Z	type		rad		reflections	;	Emissio	on level
km				[dB]		[d	B]	[dB]		day	night
0+221	386300.889	3769623.792	89.92	-		-	-	-		-	-
0+436	386493.600	3769699.206	89.92	-			-	-		-	-
Throat6 plus Alt1	Rail	I track: Direction:		Section: 39	K	(m: 0+000					
	Train ty	rpe		Number	of trains	S	Speed	Length per		Emissio	on level
				day	1	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	64		10	32	175	yes	55.0	49.2
			0	9		0	32	203	-	59.5	-
			0	30	L	7	32	151	-	64.3	60.0
Track	1	dinates of track axis	_	Track		Cu		Multiple		Corre	
Station	X	Y	Z	type		rad		reflections		Emissio	1
km				[dB]		[d	B]	[dB]		day	night
0+000	386520.669	3769727.961	89.92	-		-	-	-		-	-
0+610	386143.202	3769324.760	91.33	-		-	-	-		-	-
North 2 - Alt1		I track: Direction:		Section: 40		(m: 0+000					
	Train ty	rpe		Number	1		Speed	Length per			on level
				day	1	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	64	L	10	32	175	yes	55.0	49.2
Track		dinates of track axis		Track		Cu	-	Multiple		Corre	
Station	X	Y	Z	type		rad		reflections		Emissio	1
km				[dB]		[d	B]	[dB]		day	night
0+000	386779.890	3769877.260	91.44	-		-	-	-		-	-
0+237	386606.048	3769737.832	90.09	-		-	-	-		-	-

HSR_2trk	R	ail track: Direction:		Section: 41	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	64	10	32	175	yes	55.0	49.2
			0 0	9 30	0 7	32 32	203 151	-	59.5 64.3	- 60.0
Track	Cor	ordinates of track axis	0	Track	· · ·	urve	Multiple			ected
Station	x	Y Y	Z	type		adius	reflections	-		on level
km	~		-	[dB]		dB]	[dB]	5	day	night
0+000	386110.532	3769245.213	91.92	-		-	- [*=]		-	-
0+086	386143.202	3769324.760	91.33	-		-	-		-	-
Loop2_Horn	R	ail track: Direction:		Section: 42	Km: 0+030					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	0	32	203	-	64.5	-
Track	1	ordinates of track axis		Track		urve	Multiple			ected
Station	Х	Y	Z	type		adius	reflections	3		on level
km				[dB]	[dB]	[dB]		day	night
0+030	386663.160 386625.852	3769662.289	90.02	-		-	-		-	-
0+074 ThroatExit_S_W of		ail track: Direction:	90.11	Section: 43	Km: 0+000	-	-		-	-
	Train				of trains	Speed	Length per		Emissi	on level
	Italii	type		day	night	Speed	train	Max	day	night
				uay	night	km/h	m	IVIAN	dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track	Coo	ordinates of track axis		Track		urve	Multiple	1 7 5 5		ected
Station	Х	Y	Z	type	ra	adius	reflections	5	Emissi	on level
km				[dB]	[dB]	[dB]		day	night
0+000	386625.852	3769686.136	90.11	-		-	-		-	-
0+098	386530.357	3769701.484	89.92	-		-	-		-	-
										1/9/2020

SoundPLAN 8.1

ThroatExit_S_W of River w Horn Rail track: Direction: Section: 44 Km: 0+000 Train type Train type Number of trains Speed Length per train Max day day day might Max day day day day day km/h m Max day	el night dB(A) -
day night train Max day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day image: day	night dB(A)
Image: constraint of the second sec	dB(A)
Image: Construct and the	. ,
Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission leve km 1 1 3769678.014 90.52 - - - - -	
Station X Y Z type radius reflections Emission level km Image: Marcine State Stat	
km [dB] [dB] [dB] day 0+000 386663.431 3769678.014 90.52 - - - - -	
0+000 386663.431 3769678.014 90.52	
	night -
	-
ThroatExit_S_W of River w Horn Rail track: Direction: Section: 45 Km: 0+000	
Train type Number of trains Speed Length per Emission lev	el
day night train Max day	night
km/h m dB(A)	dB(A)
0 13 0 32 203 yes 77.9	-
Track Coordinates of track axis Track Curve Multiple Corrected	
Station X Y Z type radius reflections Emission lev	કો
km [dB] [dB] [dB] day	night
0+000 386715.203 3769579.068 89.92	-
0+061 386689.207 3769634.305 90.24	-
ThroatExit_S_W of River w Horn Rail track: Direction: Section: 46 Km: 0+000	
Train type Number of trains Speed Length per Emission lev	el
day night train Max day	night
km/h m dB(A)	dB(A)
0 13 0 32 203 yes 77.9	-
Track Coordinates of track axis Track Curve Multiple Corrected	
Station X Y Z type radius reflections Emission lev	١٤
km [dB] [dB] [dB] day	night
0+000 386530.098 3769706.166 89.92	-
0+102 386630.738 3769696.557 90.55	-
ThroatExit_S_W of River w Horn Rail track: Direction: Section: 47 Km: 0+000	
Train type Number of trains Speed Length per Emission lev	١٤
day night train Max day	night
km/h m dB(A)	dB(A)
0 13 0 32 203 yes 77.9	-
Track Coordinates of track axis Track Curve Multiple Corrected	
Station X Y Z type radius reflections Emission lev) I
	night
km [dB] [dB] [dB] day	
	-

ThroatExit_S_W of		ail track: Direction:		Section: 48	Km: 0+000				_	
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track		ordinates of track axis		Track	0	Curve	Multiple		Corre	ected
Station	Х	Y	Z	type	ra	adius	reflections	;	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386530.357	3769701.484	89.92	-		-	-		-	-
0+037	386493.600	3769699.206	89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 49	Km: 0+000		1			
	Train	type		Number		Speed	Length per		Emissi	
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		adius	reflections	;	Emissi	1
km				[dB]		[dB]	[dB]		day	night
0+000	386721.464	3769547.605	89.92	-		-	-		-	-
0+032	386715.197	3769579.095	89.92	-		-	-		-	-
ThroatExit_S_W of	f River w Horn R	ail track: Direction:		Section: 50	Km: 0+000		-			
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		adius	reflections	;	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386689.207	3769634.305	90.24	-		-	-		-	-
0+038	386663.062	3769662.269	90.04	-		-	-		-	-
l										

Ventura, LOSSAN,	, Coast Starlight 2	ail track: Direction:		Section: 51	Km: 0+000					
	<u> </u>	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
					Ŭ	km/h	m	Ì	dB(A)	dB(A)
			0	10	3	32	203	yes	76.7	73.7
			0	78	20	32	175	-	55.9	52.2
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		adius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386893.999	3770187.096	90.81	-		-	-		-	-
0+333	386973.752	3770507.725	-	-		-	-		-	-
Ventura, LOSSAN,	· · · · · · · · · · · · · · · · · · ·	ail track: Direction:		Section: 52	Km: 0+000					
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	10	3	32	203	yes	76.7	73.7
Track	0.	ordinates of track axis	0	78 Track	20	32 Curve	175 Multiple	-	55.9	52.2 ected
Station	X		z			adius	reflections		Emissi	
	X	Y	Z	type				5		1
km 0 : 000	200000 011	0770400 507	04.05	[dB]		[dB]	[dB]		day	night
0+000 0+331	386889.614 386966.343	3770188.507 3770506.879	91.05	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:	-	Section: 53	Km: 0+000		_		-	-
	Train				of trains	Speed	Length per		Emissi	on loval
	ITalli	туре		day	night	Speed	train	Max	day	night
				uay	nigin	km/h	m	IVIAN	dB(A)	dB(A)
			0	17	0	32	203	ves	62.0	
Track	Со	ordinates of track axis		Track		Curve	Multiple	,00	Corre	ected
Station	Х	Y	Z	type		adius	reflections	5	Emissi	
km			_	[dB]		[dB]	[dB]		day	night
0+000	386625.852	3769686.136	90.11	-		-	[+=]		-	-
0+098	386530.357	3769701.484	89.92	-		-	-		-	-
					·					
1										
										1/9/2020

					14						
ThroatExit_S_W of		ail track: Direction:		Section: 54		0+000					
	Train	type			of trains		Speed	Length per			on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
Track	Coo	ordinates of track axis	0	17 Track		0 Curv	32	203 Multiple	yes	62.0 Corr	ected
Station	x		z			radiu		reflections			on level
km	^	r	2	type [dB]		[dB		[dB]	,	day	1
0+000	386663.431	3769678.014	90.52	[UB] -		[uБ -	<u>'</u>	[ub] -		uay	night
0+000	386722.216	3769569.318	90.32 89.92	-		-		-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 55	Km: (0+000					
	Train				of trains		Speed	Length per		Emissi	on level
		.)		day	nigh	ht		train	Max	day	night
					l		km/h	m		dB(A)	dB(A)
			0	17		0	32	203	yes	62.0	
Track	Coc	ordinates of track axis		Track		Curv	/e	Multiple		Corr	ected
Station	X	Y	Z	type		radiu	us	reflections	5	Emissi	on level
km				[dB]		[dB	5]	[dB]		day	night
0+000	386715.203	3769579.068	89.92	-		-		-		-	-
0+061	386689.207	3769634.305	90.24	-		-		-		-	-
ThroatExit_S_W of	f River Ra	ail track: Direction:		Section: 56	Km: (0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nigh	ht		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	17		0	32	203	yes	62.0	-
Track	1	ordinates of track axis	_	Track		Curv		Multiple			ected
Station	X	Y	Z	type		radiu		reflections	5		on level
km				[dB]		[dB	5]	[dB]		day	night
0+000 0+102	386530.098 386630.738	3769706.166 3769696.557	89.92 90.55	-		-		-		-	-
ThroatExit_S_W of		ail track: Direction:	90.55	Section: 57		0+000		-		-	-
	Train				of trains		Speed	Length per		Emieei	on level
	Train	iypo		day	nigh	ht	Opeeu	train	Max	day	night
				uay	l		km/h	m	IVIAN	dB(A)	dB(A)
			0	17		0	32	203	ves	62.0	-
Track	Coc	ordinates of track axis	0	Track		Curv	_	Multiple	,		ected
Station	X	Y	Z	type		radiu	us	reflections	3	Emissi	on level
km				[dB]		[dB	5]	[dB]		day	night
0+000	386491.286	3769703.728	89.92			-				-	-
0+039	386530.098	3769706.166	89.92	-		-		-		-	-

		Rail track: Direction:		Section: 58	Km: 0+000					
	Train	n type		Number o		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
	-		0	17	0	32	203	yes	62.0	-
Track		ordinates of track axis		Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	;		on level
km				[dB]		dB]	[dB]		day	night
0+000	386530.357	3769701.484	89.92	-		-	-		-	-
0+037	386493.600	3769699.206	89.92	-		-	-	_	-	-
hroatExit_S_W o		Rail track: Direction:		Section: 59	Km: 0+000	-	1			
	Train	n type		Number c		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	17	0	32	203	yes	62.0	
Track		ordinates of track axis		Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections	;		on level
km				[dB]	[0	dB]	[dB]		day	night
0+000	386721.464	3769547.605	89.92	-		-	-		-	-
0+032	386715.197	3769579.095	89.92	-		-	-		-	-
hroatExit_S_W o		Rail track: Direction:		Section: 60	Km: 0+000	-	1			
	Train	n type		Number	of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	0	32	203	yes	64.5	-
Track		ordinates of track axis		Track		urve	Multiple			ected
	Х	Y	Z	type		dius	reflections	;	Emissi	on level
Station		1		ניירי		dB]	[dB]		day	night
km				[dB]		-				
	386689.207 386663.062	3769634.305 3769662.269	90.24 90.04	[dB] - -		-	-		-	-

South10_HSR4	R	ail track: Direction:		Section: 61	Km:	: 0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	6		3	16	203	-	60.2	59.1
			0	16		15	16			46.3	48.2
Track		ordinates of track axis	_	Track		Cur		Multiple			ected
Station	Х	Y	Z	type		rad		reflections			on level
km				[dB]		[dl	Bj	[dB]		day	night
0+000	386026.567	3768912.709	93.81	-	-		-		-	-	
0+329	386204.848	3768677.695	83.88	83.88				-		-	-
South10_HSR4		ail track: Direction:		Section: 62		: 0+000					
	Train	type			of trains		Speed	Length per			on level
				day	nig	ght		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	6 16		3	16 16	203 175	-	60.2 46.3	59.1 48.2
Track	Co	ordinates of track axis	0	16 15 16 Track Curve 16		Multiple			ected		
Station	X		Z								on level
km	^	I	2	type [dB]		radius		[dB]		day	
0+000	386039.054	3768912.182	93.75	[UD] -		[dB]		[ub]		uay	night
0+000	386204.848	3768677.695	83.88	-		-		-		-	-
South10 HSR4		ail track: Direction:	00.00	Section: 63	Km.	: 0+000					
	Train				of trains	. 01000	Speed	Longth por		Emioni	on level
	IIdiii	туре			1	a ht	Speed	Length per train	Max		
				day	nig	jin j	lum /b		IVIAX	day	night
			0	18		3	<u>km/h</u> 16	m 151	ves	dB(A) 64.8	dB(A) 59.5
			0	6		3	16	203	yes	60.2	59.1
			0	16		15	16	175	-	46.3	48.2
Track	Со	ordinates of track axis		Track		Cur	rve	Multiple	-		ected
Station	Х	Y	Z	type		rad	ius	reflections	3		on level
km				[dB]		[dl		[dB]		day	night
0+000	386044.035	3768914.069	93.78			-		-		-	-
0+311	386206.171	3768683.692	83.93	-		-	.	-		-	-

South10_HSR4	R	ail track: Direction:		Section: 64	K	(m: 0+000					
	Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	r	night	•	train	Max	day	night
				-		•	km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	6		3	16	203	-	60.2	59.1
			0	16	<u> </u>	15	16	175	-	46.3	48.2
Track	1	ordinates of track axis	_	Track		Cu		Multiple		Corrected	
Station	X	Y	Z	type		rad		reflections			on level
km				[dB]		[d	Bj	[dB]		day	night
0+000 0+298	386056.081 386206.171	3768911.282 3768683.692	93.66 83.93	-				-		-	-
South10		ail track: Direction:		Section: 65	K	(m: 0+000					1
	Train		Number	of trains	S	Speed	Length per		Emissi	on level	
				day	r	night		train	Max	day	night
					km/h		m		dB(A)	dB(A)	
			0	18		3	16	151	yes	64.8	59.5
			0	6	<u> </u>	3	16	203	-	60.2	59.1
Track		ordinates of track axis	_	Track		Curve		Multiple			ected
Station	X	Y	Z	type		radius		reflections	;		on level
km				[dB]		[d	-	[dB]		day	night
0+000 0+289	386062.371 386209.772	3768915.046 3768691.097	93.73 84.02	-		-		-		-	-
0+289 South10	· · · · ·	ail track: Direction:	84.02	Section: 66	K	(m: 0+000	· .	-		-	-
	Train				of trains		Speed	Length per		Emissi	on level
				day	1	night		train	Max	day	night
				,		0	km/h	m		dB(A)	dB(A)
			0	18		3	16	151	yes	64.8	59.5
			0	6		3	16	203	-	60.2	59.1
Track	1	ordinates of track axis		Track		Cu		Multiple			ected
Station	X	Y	Z	type		rad		reflections	5		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386072.904	3768910.668	93.58	-		-		-		-	-
0+278	386209.772	3768691.097	84.02	-		-	•	-		-	-

		s of track axis Y 3768910.870 3768691.097 Direction:	0 0 Z 89.57	Number day 18 6 Track type [dB]	night 3 3 Cu rac	Speed km/h 16 16 rve	Length per train m 151 203 Multiple	Max yes	day dB(A) 64.8 60.2	on level night dB(A) 59.5 59.1
Station X km 0+000 0 0+272 0 0	Coordinates X 386077.284 386209.772 Rail track:	Y 3768910.870 3768691.097	0 Z 89.57	18 6 Track type	3 3 Cu rac	16 16 rve	train m 151 203 Multiple		dB(A) 64.8 60.2	dB(A) 59.5 59.1
Station X km 0+000 0 0+272 0 0	X 386077.284 386209.772 Rail track:	Y 3768910.870 3768691.097	0 Z 89.57	6 Track type	3 Cu rac	16 16 rve	151 203 Multiple	yes -	64.8 60.2	59.5 59.1
Station X km 0+000 0 0+272 0 0	X 386077.284 386209.772 Rail track:	Y 3768910.870 3768691.097	0 Z 89.57	6 Track type	3 Cu rac	16 Irve	203 Multiple	yes -	60.2	59.1
Station X km 0+000 0 0+272 0 0	X 386077.284 386209.772 Rail track:	Y 3768910.870 3768691.097	Z 89.57	Track type	Cu	rve	Multiple	-		
Station X km 0+000 0 0+272 0 0	X 386077.284 386209.772 Rail track:	Y 3768910.870 3768691.097	89.57	type	rac	-	•		Corr	acted
km 0+000 (0+272 (386077.284 386209.772 Rail track:	3768910.870 3768691.097	89.57			radius			Corrected	
0+000 3 0+272 3	386209.772 Rail track:	3768691.097		[dB]			reflections			on level
0+272	386209.772 Rail track:	3768691.097			[d	B]	[dB]		day	night
	Rail track:			-		-	-		-	-
South10		L)iroction:	84.02				-		-	-
	Train type	Direction.		Section: 68						
				Number		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h			dB(A)	dB(A)
				0 18 3 16 0 6 3 16		16	151 203	yes	64.8	59.5
Track	Coordinator	s of track axis	0	Track Curve			Multiple		<u>60.2</u>	59.1 ected
Station X	1		z		radius		reflections			on level
km	^	1	2	type [dB]		[dB]			day	night
	386088.708	3768906.239	89.41	[UD] -		-	[dB]		uay	Ingrit
	386210.302	3768696.653	84.06	-		_	-		-	_
South10	Rail track:		0 1100	Section: 69	Km: 0+000					
	Train type			Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	18	3	16	151	-	64.8	59.5
			0	6	3	16	203	-	60.2	59.1
Track	1	s of track axis		Track		rve	Multiple			ected
Station X	X	Y	Z	type		lius	reflections			on level
km				[dB]	[d	B]	[dB]		day	night
	386093.644	3768905.678	93.38	-		-	-		-	-
0+255 3	386210.302	3768696.653	84.06	-		-	-		-	-

South10	Ra	ail track: Direction:		Section: 70	Km: 0+0	000					
	Train	уре		Number	of trains	Spe	eed	Length per		Emissi	on level
				day	night			train	Max	day	night
						kn	n/h	m		dB(A)	dB(A)
			0	18	3		16	151	-	64.8	59.5
			0	6	3		16	203	-	60.2	59.1
Track	1	rdinates of track axis		Track		Curve		Multiple		Corrected	
Station	X	Y	Z	type		radius		reflections			on level
km				[dB]		[dB]		[dB]		day	night
0+000	386104.970	3768904.234	93.32	-		-		-		-	-
0+249	386210.302	3768696.653	84.06				-		-	-	
South4		ail track: Direction:		Section: 71							
	Train	ype			of trains	Spe	eed	Length per			on level
				day	night			train	Max	day	night
						km/h		m		dB(A)	dB(A)
			0	45	8 32			151	-	66.0	60.7
Track	Coo	rdinates of track axis	0	15 Track	/	7 32		203 - Multiple		<u>61.5</u>	60.4 ected
Station	x		z			Curve		reflections			on level
km	^	ř	Z	type [dB]		radius					1
0+000	386209.772	3768691.097	84.02			[dB]		[dB]		day	night
0+000 0+128	386333.643	3768659.816	83.82	-		-		-		-	-
South2		ail track: Direction:	00.02	Section: 72	Km: 0+0	200					
OUUIIZ	Train				of trains		eed	Length per		Emissi	on level
	- Training	.)po		day	night		000	train	Max	day	night
				uuy	l	km	n/h	m	max	dB(A)	dB(A)
			0	89	16		32	151	-	69.0	63.8
			0	30	14		32	203	-	64.5	63.4
Track	Coo	rdinates of track axis		Track		Curve		Multiple		Corr	ected
Station	X	Y	Z	type		radius		reflections	;	Emissi	on level
km				[dB]		[dB]		[dB]		day	night
0+000	386425.543	3768034.133	80.77	-	-			-		-	-
0+177	386456.132	3767859.838	79.84	-	-			-		-	-

South2	Ra	ail track: Direction:		Section: 73	Kr	m: 0+000					
	Train				of trains	3	Speed	Length per		Emissi	on level
		.)		day	1	night		train	Max	day	night
				,		0	km/h	m		dB(A)	dB(A)
			0	45		8	32	151	-	66.0	60.7
			0	15		7	32	203	-	61.5	60.4
Track	1	ordinates of track axis		Track		Cu	rve	Multiple			ected
Station	Х	Y	Z	type			lius	reflections	5		on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386333.643	3768659.816	83.82	-		-	-	-		-	-
0+709			80.77	• • • •		-		-	-		
South2				Section: 74		m: 0+000		1			
	Train	type		Number	of trains	5	Speed	Length per		Emissi	on level
				day	n n	night		train	Max	day	night
						km/h		m		dB(A)	dB(A)
			0			151	-	66.0	60.7		
Track	0	udiantes of treats asis	0	15 7		32 203 - rve Multiple		-	61.5	60.4 ected	
Track	1	ordinates of track axis	z		Track Curve		-	•			
Station	X	Ŷ	Z	type		radius		reflections	5		on level
km	000004.005	0700000 047	00.00	[dB]		[dB]		[dB]		day	night
0+000 0+890	386334.825 386460.712	3768663.917 3767860.643	83.82 79.58	-				-		-	-
South4		ail track: Direction:	19.50	Section: 75		m: 0+000	<u>I</u>	-			
500ti14	Train				of trains		Speed	Longth por		Emioni	on level
	IIdill	lype			1		Speed	Length per train	Max		1
				day		night	km/h		IVIAX	day dB(A)	night dB(A)
			0	45		8	32	m 151	_	66.0	60.7
			0	45 15		7	32	203	-	61.5	60.4
Track	Coc	rdinates of track axis		Track		Cu	rve	Multiple			ected
Station	X	Y	Z	type		rad	lius	reflections	5	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386210.302	3768696.653	84.06	-	-			-		-	-
0+129	386334.825	3768663.917	83.82	-	_		-	-		-	-

Loop1	Ra	ail track: Direction:		Section: 76	Km: 0+000	0	1			
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Track	Coo	ordinates of track axis		Track		Curve	Multiple		Corr	ected
Station	Х	Y	Z	type		radius	reflections	;	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386334.825	3768663.917	83.82	-		-	-		-	-
0+368	386626.714	3768836.135	84.15	-		-	-		-	-
South4_HSR2	Ra	ail track: Direction:		Section: 77	Km: 0+000	0				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	45	8	32	151	-	66.0	60.7
			0	14	7	32	203	-	61.2	60.4
— — — —	2	11 A A A A A A	0	32	30	32	-	-	52.0	54.0
Track	1	ordinates of track axis	_	Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections			on level
km				[dB]		[dB]	[dB]		day	night
0+000 0+969	386206.171 386457.662	3768683.692 3767878.014	83.93 79.69	-		-	-		-	-
South4 HSR2		ail track: Direction:	79.09	Section: 78	Km: 0+000	-	-		-	-
						-				
	Train	type		Number o		Speed	Length per			on level
				day	night		train	Max	day	night
				45	C C	km/h	m		dB(A)	dB(A)
			0 0	45 15	8 7	32 32	151 203	-	66.0 61.5	60.7 60.4
			0	32	30	32	175	-	52.0	54.0
Track	Coo	ordinates of track axis	0	Track		Curve	Multiple			ected
Station	X	Y I	Z	type		radius	reflections			on level
km				[dB]		[dB]	[dB]		day	night
0+000	386204.959	3768679.601	83.89	-		-	-		-	-
0+965	386453.503	3767877.061	79.94	-		-	-		-	-
ĺ										

West of NW Mer	ge with SBL/Amtrak ER			Section: 79	Km: 0+237			-		
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
				0.1	10	km/h	m		dB(A)	dB(A)
			0 0	64 14	10 0	32 32	175 203	yes	55.0 61.3	49.2
			0	45	10	32	151	_	66.0	61.7
Track	Co	ordinates of track axis	-	Track	Cur		Multiple	•	Corr	ected
Station	X	Y	z	type	radi		reflections			on level
km				[dB]	[di		[dB]		day	night
0+237 0+323	386606.048 386520.669	3769737.832	90.09	-	-		-		-	-
0+323	386520.669	3769727.961	89.92	-	-		-		-	-

HSR_2trk	R	ail track: Direction:		Section: 1	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	64	10	32	175	yes	55.0	49.2
Track	1	ordinates of track axis		Track	0	Curve	Multiple			ected
Station	Х	Y	Z	type		adius	reflections		Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386860.517	3770117.624	91.43	-		-	-		-	-
0+012	386864.465	3770129.156	91.43	-		-	-		-	-
HSR_2trk		ail track: Direction:		Section: 2	Km: 0+000		1			
	Train	type		Number		Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
	2		0	64	10	32	175	yes	55.0	49.2
Track	1	ordinates of track axis	_	Track		Curve	Multiple			ected
Station	Х	Y	Z	type		adius	reflections			on level
km				[dB]		[dB]	[dB]		day	night
0+000 0+031	386864.465	3770129.156	91.43 91.44	-		-	-		-	-
HSR_2trk	386875.484	ail track: Direction:	91.44	Section: 3	Km: 0+000		-		-	-
	Train			Number		Speed	Length per		Emissi	on level
	Train	type		day	night	Opeed	train	Max	day	night
				uay	night	km/h	m	IVIAN	dB(A)	dB(A)
			0	64	10	32	175	ves	55.0	49.2
Track	Со	ordinates of track axis	Ŭ	Track		Curve	Multiple	<u> </u>		ected
Station	X	Y	z	type		adius	reflections		Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386875.484	3770158.456	91.44	-		-			-	-
0+012	386880.201	3770169.696	91.43	-		-	-		-	-
HSR_2trk	R	ail track: Direction:		Section: 4	Km: 0+000					
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
					-	km/h	m		dB(A)	dB(A)
			0	64	10	32	175	yes	55.0	49.2
Track	Со	ordinates of track axis		Track	(Curve	Multiple		Corr	ected
Station	Х	Y	Z	type	r	adius	reflections	;	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386880.201	3770169.696	91.43	-		-	-		_	-
0+039	386895.602	3770205.999	91.09	-		-	-		-	-

	Train typ			Section: 5	KI	n: 0+000					
	i i ani i yp	e		Number	of trains		Speed	Length per		Emissi	ion level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	64		10	32	175	yes	55.0	49.2
Track	1	nates of track axis		Track			rve	Multiple			rected
Station	X	Y	Z	type			lius	reflections			ion level
km				[dB]		[d	B]	[dB]		day	night
0+000	386796.784	3769931.452	90.62	-		-	-	-		-	-
0+012	386792.782	3769919.939	91.19	-				-		-	-
HSR_1trk		rack: Direction:		Section: 6		m: 0+000					
	Train typ	e			of trains		Speed	Length per			ion level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
	~ ·		0	64		10	32	175	yes	55.0	49.2
Track		nates of track axis	_	Track			rve	Multiple			rected
Station	X	Y	Z	type		rad	-	reflections			ion level
km				[dB]		[d	-	[dB]		day	night
0+000 0+209	386796.784 386864.465	3769931.452 3770129.156	90.62 91.43	-		-	-	-		-	-
HSR_2trk_throat7		rack: Direction:	91.43	Section: 7	Kn	n: 0+000	-	-		-	-
nonc_zanc_anoad	Train typ			Number			Speed	Length per		Emissi	ion level
		•		day	1	ight	opeca	train	Мах	day	night
							km/h	m		dB(A)	dB(A)
			0	64		10	32	175	ves	55.0	49.2
Track	Coord	nates of track axis		Track		Cu	rve	Multiple	. ,		ected
Station	X	Y	Z	type		rad	lius	reflections		Emissi	ion level
km				[dB]		[d	В]	[dB]		day	night
0+000	386520.669	3769727.961	89.92	-		-	-	-		-	-
0+610	386143.202	3769324.760	91.33	-			-	-		-	-
HSR_2trk_conventiona	al_North4 Rail	rack: Direction:		Section: 8	Kn	n: 0+000					
	Train typ	e		Number	of trains		Speed	Length per		Emissi	ion level
				day	ni	ight		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	64		10	32	175	yes	55.0	49.2
Track	1	nates of track axis		Track			rve	Multiple			rected
Station	X	Y	Z	type			lius	reflections		Emissi	ion level
km				[dB]		[d	B]	[dB]		day	night
0+000	386779.890	3769877.260	91.44	-			-	-		-	-
0+237	386606.048	3769737.832	90.09	-		-	-	-		-	-

Train type Number of trans day Speed (nght) Length per train (m Rmission level (ds) Emission level (ds) Emission level (ds) Track Coordinates of track axis (n) 0 64 10 32 175 yes 56.0 49.2 Track Coordinates of track axis (n) Y Z type readus (dB) (dB) Corrected Emission level (dB) 49.2 0+620 3965/21324 3769733.414 89.89 1 . <	HSR_2trk_Throat7	R	ail track: Direction:		Section: 9	K	(m: 0+000					
day night train Max day night Track Coordinates of track axis Track Curve Multiple Corrected 49.2 Station X Y Z Track Curve Multiple Corrected 49.2 No 386524.324 3769733.414 89.89 1		Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
Image: constraint of the state of					day	1	night			Max	day	night
Track km Coordinates of track axis km Track Y Curve (dB) Multiple (dB) Corrected made (dB) Corrected made (U U	km/h	m		•	-
Station X Y Z type (dB) radius (dB) reflections (dB) reflections (dB) Emission level day might 0+000 0+620 386524.324 386524.324 3769733.414 3769325.196 91.20 ·				0	64		10	32	175	yes		49.2
km i i idB idB idB idB idB day night 0+000 336524 32d 3769732.416 98.88 91.20 i <t< td=""><td>Track</td><td>Co</td><td>ordinates of track axis</td><td></td><td>Track</td><td></td><td>Cu</td><td>irve</td><td>Multiple</td><td></td><td>Corr</td><td>rected</td></t<>	Track	Co	ordinates of track axis		Track		Cu	irve	Multiple		Corr	rected
0+000 0+620 386534.324 386139.200 3769335.196 3769325.196 91.20 91.20 Image: constraint of the section is constraint of the sect	Station	Х	Y	Z	type		rac	lius	reflections	;	Emissi	ion level
0+620 386139.200 3769325.196 91.20 - - - - - - - HSR_2trk_throat7 Rail track: Direction: Section: 10 Km: 0+000 train / Max day night	km				[dB]		[d	B]	[dB]		day	night
HSR_2tht_throat7 Rail track: Direction: Section: 10 Km: 0+000 Train type Number of trains day Number of trains might Speed Length per km/h Max Emission level day might day Track Coordinates of track axis Track Track Curve (dB) Multiple Corrected Station X Y Z type radius reflections Emission level 6 10 32 175 ves 55.0 49.2 Station X Y Z type radius reflections Emission level 0+000 386143.202 3769245.213 91.92 -					-			-	-		-	-
Train type Number of trains day Speed night Length per train m Max Max Emission level day might day 0 64 10 32 175 yes 55.0 49.2. Track Coordinates of track axis Track Coordinates of track axis Track Coordinates of track axis Track Curve Multiple Corrected km Y Z Igtp rack Igtp reflections Emission level wm 386110.532 3769245.213 91.92 -				91.20				-	-		-	-
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	HSR_2trk_throat7											
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Train	type		Number	of trains	S	Speed	Length per			
Image: constraint of track axis Track Course Multiple 55.0 49.2 Track Coordinates of track axis Track Curve Multiple Corrected km Y Z type radius reflections Emission level 0+000 386110.52 3769245.213 91.92 - <td< td=""><td></td><td></td><td></td><td></td><td>day</td><td> 1</td><td>night</td><td></td><td>train</td><td>Max</td><td></td><td>-</td></td<>					day	1	night		train	Max		-
Track Station Coordinates of track axis Track Y Curve (dB) Multiple (dB) Corrected medius Corrected medius 0+000 386110.532 3769245.213 91.92 -<												
$ \begin{array}{ c c c c c c } Station & X & Y & Z & type & radius & reflections & Emission level \\ \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		-		0		L		-		yes		
km ind ind <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td>				_				-				
0+000 0+086 386110.532 386143.202 3769245.213 3769324.760 91.92 91.33 - <td></td> <td>X</td> <td>Y</td> <td>Z</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td>		X	Y	Z						•		
0+086 386143.202 3769324.760 91.33 -							[d	B]	[dB]		day	night
HSR_2trk_throat7 Rail track: Direction: Section: 11 Km: 0+000 Train type Number of trains day Number of trains night Speed km/n Length per train Max Emission level day night day Track Coordinates of track axis 0 64 10 32 175 yes 55.0 49.2 Track Coordinates of track axis Track Curve Multiple Corrected km Y Z type radius reflections Emission level 0+000 386139.200 3769325.196 91.20 - - - - 0+072 38610.318 Direction: Section: 12 Km: 0+000 - - - - - HSR_2trk-4trak North Rail track: Direction: Section: 12 Km: 0+000 - <td></td> <td>-</td>												-
Train type Number of trains day Speed night Length per train km/h Emission level day Track Coordinates of track axis 0 64 10 32 175 yes 55.0 49.2 Track Coordinates of track axis Track Curve Multiple Corrected Km Y Z type radius reflections Emission level km 386139.200 3769325.196 91.20 - - - - 0+000 386139.200 3769325.196 91.92 - - - - - HSR_2trk-4trak NOrth Rail track: Direction: Section: 12 Km: 0+000 - - - - - HSR_2trk-4trak NOrth Rail track: Direction: Section: 12 Km: 0+000 - - - - Train type 0 64 10 32 175 yes 55.0 49.2 Track Coordinates of track axis Track Speed Length per train Max dB(A) dB(A) 0 64 10 32 175 yes 55.0 49.2 Track Coordinates of track axis Track				91.33				-	-		-	-
day night train Max day night km/h m Max day night km/h m Max day night Track Coordinates of track axis 0 64 10 32 175 yes 55.0 49.2 Track Coordinates of track axis Track Curve Multiple Corrected km Y Z type radius reflections Emission level km day 91.20 -	HSK_2lik_inioal/											
Image: constraint of track axis Image: constra		Irain	type			1		Speed				1
$\begin{tabular}{ c c c c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$					day	1	night			Max		-
Track Station Coordinates of track axis Track Y Track Y Curve type Multiple radius Multiple reflections Corrected km Y Y Z type [dB] radius reflections Emission level 0+000 386139.200 3769325.196 91.20 - - - - 0+072 386110.318 3769258.991 91.92 - - - - HSR_2trk-4trak NOrth Rail track: Direction: Section: 12 Km: 0+000 Train type Section: 12 Km: 0+000 Track Coordinates of track axis O 64 10 32 175 yes 55.0 49.2 Track Coordinates of track axis Track Curve Multiple Corrected Km/h m Max day night km/h m Emission level Gender frack axis Track Coordinates of track axis Track Curve Multiple Corrected Km Y Z type radius reflections Emission level km Image: colspan="4">Image: colspan="4">Image: colspan="4">Image: colspan="4">Image: col				0	64		10					
$ \begin{array}{ c c c c c c } Station & X & Y & Z & type & radius & reflections & Emission level \\ \hline km & & & & & & & & & & \\ \hline km & & & & & & & & & & & \\ \hline 0+000 & 386139.200 & 3769325.196 & 91.20 & & & & & & & & & & & & & & & & & & &$	Track	Co	ordinatos of track avis	0	-	L				yes		-
km (dB) (dB) (dB) (dB) (day) night 0+000 386139.200 3769325.196 91.20 - <td< td=""><td></td><td>1</td><td>1</td><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		1	1	7								
0+000 0+072 386139.200 386110.318 3769325.196 3769258.991 91.20 91.92 - <td></td> <td>^</td> <td>I</td> <td>2</td> <td>••</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td>		^	I	2	••							1
0+072 386110.318 3769258.991 91.92 - <th<< td=""><td></td><td>386139 200</td><td>3760325 106</td><td>91.20</td><td></td><td></td><td></td><td></td><td></td><td></td><td>uay</td><td>nign</td></th<<>		386139 200	3760325 106	91.20							uay	nign
HSR_2trk-4trak NOrth Rail track: Direction: Section: 12 Km: 0+000 Train type Number of trains Speed Length per Max Emission level day night Max Max day night day night km/h m Max day night day night km/h m dB(A) dB(A) Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km 0+000 386792.782 3769919.939 91.19 - - - - -					_				_		-	_
$ \begin{array}{ c c c c c c } \hline \\ \hline $					Section: 12	K	(m: 0+000					
$ \begin{array}{ c c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \end{tabular} & \begin{tabular}{ c c c c c c c } \hline \end{tabular} & \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					day	1	night			Max	day	night
Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km Image: Correct of track axis Image: Correct of track axis Image: Correct of track axis Emission level 0+000 386792.782 3769919.939 91.19 Image: Correct of track axis Image: Correct of track axis								km/h	m		-	-
Station X Y Z type radius reflections Emission level km -				0	64		10	32		yes		
km <td></td> <td>Co</td> <td>ordinates of track axis</td> <td></td> <td>Track</td> <td></td> <td>Cu</td> <td>irve</td> <td>Multiple</td> <td></td> <td></td> <td></td>		Co	ordinates of track axis		Track		Cu	irve	Multiple			
0+000 386792.782 3769919.939 91.19	Station	Х	Y	Z	••					;	Emissi	on level
	km				[dB]		[d	B]	[dB]		day	night
0+272 386606.968 3769742.417 89.89					-			-	-		-	-
	0+272	386606.968	3769742.417	89.89	-			-	-		-	-

South10_HSR4	R	ail track: Direction:		Section: 13	K	(m: 0+000					
	Train			Number			Speed	Length per		Emissi	on level
	T Gall	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		day	1	night	opood	train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	19		5	16	175	yes	47.2	43.5
Track	Co	ordinates of track axis		Track		Cu	irve	Multiple		Corr	ected
Station	X	Y	Z	type		rac	dius	reflections	;	Emissi	on level
km				[dB]		[d	IB]	[dB]		day	night
0+000	386026.567	3768912.709	93.81	-			-	-		-	-
0+329	386204.848	3768677.695	83.88	-			-	-		-	-
South10_HSR4	R	ail track: Direction:		Section: 14	K	(m: 0+000		1	-		
	Train	type		Number	of trains	S	Speed	Length per		Emissi	on level
				day	1	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
	-		0	19	L	5	16	203	yes	65.3	61.6
Track	1	ordinates of track axis	_	Track			irve	Multiple			ected
Station	Х	Y	Z	type			dius	reflections			on level
km				[dB]		•	IB]	[dB]		day	night
0+000 0+316	386039.054 386204.848	3768912.182 3768677.695	93.75 83.88	-			-	-		-	-
South10_HSR4		ail track: Direction:	03.00	Section: 15	K	(m: 0+000	-	-		-	-
50001110_1151(4	Train			Number			Speed	Longth por		Emiosi	on level
	Talli	type		day	1	s night	Speed	Length per train	Max	day	night
				uay	'	ingin	km/h	m	IVIAN	dB(A)	dB(A)
			0	19		5	16	175	ves	47.2	43.5
Track	Co	ordinates of track axis		Track	· · · ·	-	irve	Multiple			ected
Station	x	Y	Z	type			dius	reflections	;		on level
km				[dB]		[d	IB]	[dB]		day	night
0+000	386044.035	3768914.069	93.78	-			-	-		-	-
0+311	386206.171	3768683.692	83.93	-			-	-		-	-
South10_HSR4	R	ail track: Direction:		Section: 16	K	(m: 0+000					
	Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	1	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	19		5	16	175	yes	47.2	43.5
Track		ordinates of track axis		Track			irve	Multiple			ected
Station	X	Y	Z	type			lius	reflections		Emissi	on level
km				[dB]		[d	IB]	[dB]		day	night
0+000	386056.081	3768911.282	93.66	-			-	-		-	-
0+298	386206.171	3768683.692	83.93	-			-	-		-	-

South10	Ra	il track: Direction:		Section: 17	Km	n: 0+000					
	Train t	VDe		Number	of trains		Speed	Length per		Emissi	on level
				day	1	ight		train	Мах	day	night
						5	km/h	m		dB(A)	dB(A)
			0	30		5	16	151	yes	67.0	61.7
			0	12		3	16	203	-	63.4	58.6
Track		rdinates of track axis		Track		Cu	rve	Multiple		Corrected	
Station	X	Y	Z	type		rad		reflections	;		on level
km				[dB]		[dl	B]	[dB]		day	night
0+000	386062.371	3768915.046	93.73	-		-		-		-	-
0+289	386209.772	3768691.097	84.02			-		-	-		
South10	Ra	il track: Direction:		Section: 18	Km	n: 0+000		1			
	Train t	уре		Number	of trains		Speed	Length per		Emissi	on level
				day	ni	ight		train	Max	day	night
						km/h		m		dB(A)	dB(A)
			0			151	yes	67.0	61.7		
Tracti	0	alla eta eta fitue eta erale	0	12		3	16	203	-	63.4	58.6
Track	1	rdinates of track axis	7	Track Curve		-	Multiple			ected	
Station	X	Y	Z	type		radius		reflections			on level
km	000070.004	0700040.000	00.50	[dB]		[dB]		[dB]		day	night
0+000 0+278	386072.904 386209.772	3768910.668 3768691.097	93.58 84.02	-		-		-		-	-
South10		il track: Direction:	04.02	Section: 19	Km	n: 0+000				-	
30001110					of trains	n. 0 + 000	Chood	Longth por		Eminai	on level
	Train t	уре			1	a la t	Speed	Length per	Max		1
				day	l ni	ight	lune //n	train	Max	day	night
			0	30		5	<u>km/h</u> 16	m 151	yes	dB(A) 67.0	dB(A) 61.7
			0	30 12		3	16	203	yes -	63.4	58.6
Track	Соо	rdinates of track axis	0	Track		Cui		Multiple			ected
Station	X	Y	Z	type		rad		reflections			on level
km				[dB]		[dl		[dB]		day	night
0+000	386077.284	3768910.870	89.57	-		-	-	-		-	-
0+272	386209.772	3768691.097	84.02	-	-			-		-	-

South10	Rail	track: Direction:		Section: 20	Km: 0+000)				
	Train typ	De		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	5	16	151	yes	67.0	61.7
			0	12	3	16	203	-	63.4	58.6
Track		linates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386088.708	3768906.239	89.41	-		-	-		-	-
0+260	386210.302	3768696.653	84.06	-		-	-		-	-
South10	Rail	track: Direction:		Section: 21	Km: 0+000)	1			
	Train typ	be		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	5	16	151	-	67.0	61.7
I			0	12	3	16	203	-	63.4	58.6
Track	1	linates of track axis	-	Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000 0+255	386093.644	3768905.678 3768696.653	93.38 84.06	-		-	-		-	-
	386210.302		84.00	Castian, 00			-		-	-
South10		track: Direction:		Section: 22	Km: 0+000					
	Train typ	be			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
				00		km/h	m		dB(A)	dB(A)
			0	30 12	5 3	16 16	151 203	-	67.0 63.4	61.7 58.6
Track	Coord	linates of track axis	0	Track		Curve	Multiple	-		ected
Station	x		z	type		radius	reflections			on level
km	Λ	I	2	[dB]		[dB]	[dB]	,	day	night
0+000	386104.970	3768904.234	93.32	[UB] -		- -	[ub]		uay	
0+000	386210.302	3768696.653	93.32 84.06	-		-	-		-	-
0.210		0.0000000	0.000		I	I			I	1

South4	R	ail track: Direction:		Section: 23	Km: 0	0+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	t		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	89	10	6	32	151	-	69.0	63.8
			0	38		7	32	203	-	65.5	60.7
Track	1	ordinates of track axis		Track		Cur	ve	Multiple		Corr	ected
Station	Х	Y	Z	type		radi		reflections	6		on level
km				[dB]		[dE	3]	[dB]		day	night
0+000	386209.772	3768691.097	84.02	-		-		-		-	-
0+128	386333.643	3768659.816	83.82	-		-		-		-	-
South2		ail track: Direction:		Section: 24	Km: 0	0+000		1			
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night	it		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	89	10		32	151	-	69.0	63.8
Tract	0	and a state of the state of the	0	<u>17</u>	4	4	32	203	-	62.0	58.0
Track	1	ordinates of track axis	7	Track		Cur	-	Multiple			ected
Station	Х	Y	Z	type		radi		reflections	5		on level
km	000405 540	0700004.400	00.77	[dB]		[dE	-	[dB]		day	night
0+000 0+177	386425.543 386456.132	3768034.133 3767859.838	80.77 79.84	-		-		-		-	-
South2		ail track: Direction:	79.04	Section: 25	Km: 0	-		-		-	-
Southz						0+000		L south a se		Enteri	an lauri
	Train	туре			of trains		Speed	Length per			on level
				day	night	it i	lune (h	train	Max	day	night
			0	90	10	6	km/h	m 151		dB(A)	dB(A) 63.8
			0 0	89 38		о 7	32 32	203	-	69.0 65.5	60.7
Track	Cor	ordinates of track axis	0	Track		, Cur	_	Multiple			ected
Station	X	Y Y	Z	type		radi		reflections			on level
km				[dB]		[dE		[dB]		day	night
0+000	386333.643	3768659.816	83.82	-			-	-		-	-
0+709	386425.610	3768034.139	80.77	-		-		-		-	-

South2	Rail tr	ack: Direction:		Section: 26	Km: 0+000					
	Train type	•			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	89	16	32	151	-	69.0	63.8
			0	38	7	32	203	-	65.5	60.7
Track	Coordin	ates of track axis		Track	Cu	irve	Multiple		Corr	rected
Station	X	Y	Z	type	rac	dius	reflections	5	Emiss	ion level
km				[dB]	[c	IB]	[dB]		day	night
0+000	386334.825	3768663.917	83.82	-		-	-		-	-
0+890	386460.712	3767860.643	79.58	-		-	-		-	-
South4	Rail tr	ack: Direction:		Section: 27	Km: 0+000					
	Train type)		Number	of trains	Speed	Length per		Emiss	on level
				day	night		train	Max	day	night
				,		km/h	m		dB(A)	dB(A)
			0	89	16	32	151	-	69.0	63.8
			0	38	7	32	203	-	65.5	60.7
Track	Coordir	ates of track axis		Track	Cu	irve	Multiple			ected
Station	X	Y	Z	type	rac	dius	reflections	5	Emiss	ion level
km				[dB]		IB]	[dB]		day	night
0+000	386210.302	3768696.653	84.06	-		-	-		-	
0+129	386334.825	3768663.917	83.82	_		_	-		-	-
_oop1	Rail tr		00.02	Section: 28	Km: 0+000					
	Train type)		Number	of trains	Speed	Length per		Emiss	ion level
				day	night		train	Max	day	night
				uuy	ingit	km/h	m	max	dB(A)	dB(A)
Track	Coordir	ates of track axis		Track	Cu	Irve	Multiple			rected
Station	X	Y	Z	type		dius	reflections			ion level
km		1	2	[dB]		IB]	[dB]	,		1
	200224.025	3768663.917	02.02	[ub] -		_			day	night
	386334.825	3768836.135	83.82 84.15	-		-	-		-	-
0+000 0+368	386626.714			-		-	-		-	-

South4_HSR2	R	ail track: Direction:		Section: 29	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
				,		km/h	m	1	dB(A)	dB(A)
			0	39	10	32	175	-	52.9	49.2
Track	Со	ordinates of track axis		Track		Curve	Multiple		Corr	ected
Station	Х	Y	Z	type	1	radius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386206.171	3768683.692	83.93	-		-	-		-	-
0+969	386457.662	3767878.014	79.69	-		-	-		-	-
South4_HSR2	R	ail track: Direction:		Section: 30	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	39	10	32	175	-	52.9	49.2
Track	Co	ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type	1	radius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386204.959	3768679.601	83.89	-		-	-		-	-
0+965	386453.503	3767877.061	79.94	-		-	-		-	-
LAUS_12	R	ail track: Direction:		Section: 31	Km: 0+000)	-			
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	22	4	16	151	-	65.8	61.0
_	-		0	7	0	16	203	-	60.9	-
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type	1	radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-	-		-	-
0+457	386093.644	3768905.678	93.38	-		-	-		-	-
1										

LAUS_12	R	ail track: Direction:		Section: 32	Km: 0+0	000					
	Train	type		Number	of trains	Speed	ł	Length per		Emissi	on level
				day	night			train	Max	day	night
				,		km/h		m		dB(A)	dB(A)
			0	22	4		16	151	-	65.8	61.0
			0	7	0		16	203	-	60.9	-
Track	1	ordinates of track axis		Track		Curve		Multiple			ected
Station	Х	Y	Z	type		radius		reflections			on level
km				[dB]		[dB]		[dB]		day	night
0+000	386177.817	3769354.950	91.92	-		-		-		-	-
0+457	386104.970	3768904.234	93.32	-		-		-		-	-
LAUS_12		ail track: Direction:		Section: 33	Km: 0+0						
	Train	type			of trains	Speed	1	Length per			on level
				day	night			train	Max	day	night
						km/h		m		dB(A)	dB(A)
			0	22 7	4		16 16	151 203	-	65.8 60.9	61.0
Track	Co	ordinates of track axis	0	Track		Curve		Multiple	-		ected
Station	x		z	type		radius		reflections			on level
km	~		-	[dB]		[dB]		[dB]		day	night
0+000	386178.406	3769381.047	91.92	-		-		-		-	-
0+483	386072.904	3768910.668	93.58	-		-		-		-	-
LAUS_12	R	ail track: Direction:		Section: 34	Km: 0+0	000					
	Train	type		Number	of trains	Speed	k	Length per		Emissi	on level
				day	night			train	Max	day	night
						km/h		m		dB(A)	dB(A)
			0	22	4		16	151	-	65.8	61.0
			0	7	0		16	203	-	60.9	-
Track	1	ordinates of track axis	-	Track		Curve		Multiple			ected
Station	Х	Y	Z	type		radius		reflections			on level
km	200470 402	0700004 047	04.00	[dB]		[dB]		[dB]		day	night
0+000 0+483	386178.406 386062.371	3769381.047 3768915.046	91.92 93.73	-		-		-		-	
0+403	300002.371	3/00913.040	93.73	-	I	-	I	-	l	-	ı -

	R4 R	Rail track: Direction:		Section: 35	Km: 0+000					
	Train	n type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	32	5	16	175	-	49.3	43.5
Track		pordinates of track axis		Track		rve	Multiple			ected
Station	Х	Y	Z	type		lius	reflections			on level
km				[dB]	[d	-	[dB]		day	night
0+000 0+398	386056.081 386134.905	3768911.282 3769300.687	93.66 91.92	-			-		-	-
_AUS_12	F	Rail track: Direction:		Section: 36	Km: 0+000					
	Trair	n type		Number of	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0 0	22 7	4 0	16 16	151 203	-	65.8 60.9	61.0 -
Track	Cc	ordinates of track axis		Track	Cu	rve	Multiple			ected
Station	Х	Y	Z	type	rad	lius	reflections		Emissi	on level
km				[dB]	[d	B]	[dB]		day	night
0+000 0+481	386178.406 386077.284	3769381.047 3768910.870	91.92 89.57	-		-	-		-	
_AUS_12	•	Rail track: Direction:		Section: 37	Km: 0+000					
	Trair	n type		Number o	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0 0	22 7	4 0	16 16	151 203	-	65.8 60.9	61.0
Track	Cc	oordinates of track axis		Track	Cu	rve	Multiple		Corr	ected
Station	Х	Y	Z	type	rad	lius	reflections		Emissi	on level
km				[dB]	[d	B]	[dB]		day	night
	386178.406	3769381.047 3768906.239	91.92 89.41	-		-	-		-	-

Throat7	R	ail track: Direction:		Section: 38	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
				-		km/h	m		dB(A)	dB(A)
			0	36	8	32	151	-	65.1	60.7
			0	11	0	32	203	-	60.3	-
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386218.875	3769479.511	89.92	-		-	-		-	-
0+427	386528.833	3769712.436	89.92	-		-	-		-	-
Throat7		ail track: Direction:		Section: 39	Km: 0+000		1		-	
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	36	8	32	151	-	65.1	60.7
Track	Car	ordinates of track axis	0	11 Track	0	32 Curve	203	-	60.3 Corr	ected
Station	x		z				Multiple reflections			on level
km	^	ř	2	type [dB]		radius [dB]		5		1
0+000	386218.718	3769479.515	89.92	ĮαΒj		[αΒ]	[dB]		day	night
0+000 0+094	386178.905	3769394.567	89.92 91.92	-		_	-		-	
Throat7		ail track: Direction:	51.52	Section: 40	Km: 0+000	1			1	
moatr	Train				of trains	Speed	Length per		Emioni	on level
	IIdili	type		day	night	Speed	train	Max	day	night
				uay	nigrit	km/h		IVIAX		-
			0	36	8	32	m 151	-	dB(A) 65.1	dB(A) 60.7
			0	11	0	32	203	-	60.3	-
Track	Co	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	3	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386174.760	3769396.376	89.92	-		-			-	-
0+532	386527.929	3769722.157	89.92	-		-	-		-	-

Throat7	R	ail track: Direction:		Section: 41	K	(m: 0+000					
	Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	1	night		train	Max	day	night
						-	km/h	m	Ī	dB(A)	dB(A)
			0	36		8	32	151	-	65.1	60.7
			0	11		0	32	203	-	60.3	-
Track		ordinates of track axis	_	Track		Cu		Multiple			ected
Station	Х	Y	Z	type		rad		reflections	5		on level
km				[dB]		[dl	-	[dB]		day	night
0+000	386174.793	3769396.361	89.92	-		-		-		-	-
0+526	386528.159	3769717.272	89.92			-	·	-		-	-
Loop1		Rail track: Direction:		Section: 42		(m: 0+000					
	Train	type		Number	1	1	Speed	Length per			on level
				day		night	lune //n	train	Max	day	night
			0	60		0	km/h 32	m 151	-	dB(A) 67.3	dB(A)
Track	Co	ordinates of track axis	0	Track		Cui		Multiple	<u> </u>		ected
Station	X		z	type		rad		reflections			on level
km	~	I	2	[dB]		[dl		[dB]	,	day	night
0+000	386626.714	3768836.135	84.15	-		-	-	-		-	-
0+754	386721.490	3769547.532	89.92	-		-		-		-	-
NE_5trk	R	ail track: Direction:		Section: 43	K	(m: 0+000				•	•
	Train	type		Number	of trains	s	Speed	Length per		Emissi	on level
				day	1	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	60		13	32	151	-	67.3	63.0
Track		ordinates of track avia	0	19 Track		0 Cui	32	203 Multiple	-	62.5	ected
Station	X	ordinates of track axis Y	z			rad		reflections			on level
km	^	T	2	type [dB]		iau [dl		[dB])	day	1
0+000	386528.833	3769712.436	89.92	[ub] -				[ub] -		uay	night
0+000	386635.696	3769712.430	91.31	-		-		-		-	
	550055.050	5765776.657	51.51		I						

Train type Number of trains day Speed night Length pr km/h Max Emission level day might might 0 180 40 32 151 - 72.0 67.7 Track Coordinates of track axis Track Curve Multiple Corrected km Y Z Track Curve Multiple Corrected km Y Z type radius radius reflections Emission level winestide Rail track: Direction: Section: 45 Km/h -	AmtrakEast, SBL,	20% Metrolink N	Rail track: Direction:		Section: 44		Km: 0+000					
day night itrain Max day night - 0 180 40 32 151 - 72.0 67.7 Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km - </td <td></td> <td></td> <td></td> <td></td> <td>Number</td> <td>of trai</td> <td>ns</td> <td>Speed</td> <td>Length per</td> <td></td> <td>Emissi</td> <td>on level</td>					Number	of trai	ns	Speed	Length per		Emissi	on level
Image: constraint of track axis 0 180 40 32 151 - 72.0 67.7 Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level Mm										Max		night
Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level 0+000 386603.806 3769725.686 89.92 - - - - - 0+000 386603.806 3769725.686 89.92 - - - - - - Riverside Rail track: Direction: Section: 45 Km: 0+000 Km: 0+000 - - - - - Track Coordinates of track axis Section: 45 Km: 0+000 Speed Length per train Max day night Track Coordinates of track axis Track Curve Multiple Corrected Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km X Y Z type radius IdB day night 0+000 386823.638 376977.065 89.26 - - - - - 0+256 386635.696					,		U	km/h	m		dB(A)	dB(A)
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				0	180		40	32	151	-		
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Track	Co	ordinates of track axis		Track		Cu	irve	Multiple		Corr	ected
0+000 0+309 386603.806 386912.028 3769725.686 3769750.728 89.92 91.91 - <td>Station</td> <td>Х</td> <td>Y</td> <td>Z</td> <td>type</td> <td></td> <td>rac</td> <td>lius</td> <td>reflections</td> <td>;</td> <td>Emissi</td> <td>on level</td>	Station	Х	Y	Z	type		rac	lius	reflections	;	Emissi	on level
0+309 386912.028 3769750.728 91.91 -	km				[dB]		[d	B]	[dB]		day	night
Riverside Rail track: Direction: Section: 45 Km: 0+000 Length per train Max Emission level day night dB(A) ddg/ dB(A) night ddg/ dB(A) ddg/ dB(A) night dd					-			-	-		-	-
Train typeNumber of trains daySpeedLength per trainEmission levelTrackCoordinates of track axisTrackCurveMultipleCorrectedStationXYZtyperadiusreflectionsEmission levelkm0+000386823.6383769577.06589.260+256386635.6963769718.03191.31North4Rail track:Direction:Section:46Km: 0+000SpeedLength per trainMaxdaynightTrackCoordinates of track axisTrackSection:46Km: 0+000North4Rail track:Direction:Section:46Km: 0+000SpeedLength per trainEmission level daynightTrackCoordinates of track axisTrackCurveNumber of trains trainSpeedLength per trainEmission level daynightTrackCoordinates of track axisTrackCurveMultipleCorrected trainEmission level daynightMaxYZtyperadiusradiusreflectionsEmission level daynightMax01ZtyperadiusreflectionsEmission level traindaynight daynightMax10111<				91.91	-		. ·	-	-		-	-
daynighttrainMaxdaynightKm/hCoordinates of track axisTrackCurveMultipleCorrectedStationXYZtyperadiusreflectionsEmission levelkm(dB)(dB)(dB)(dB)(dB)daynight0+000386823.6383769577.06589.260+25638635.6963769718.03191.31North4Rail track:Direction:Section: 46Km: 0+000Km/hmEmission level-Train typeNumber of trains daySpeedLength per trainEmission level daydaynightTrackCoordinates of track axisTrackCurveMultiple trainCorrectedTrackCoordinates of track axisTrackCurveMultipleCorrectedKmYZtyperadiusreflectionsEmission level dayMax0+000386592.6963769724.24989.920+000386592.6963769724.24989.920+000386592.6963769724.24989.920+000386592.6963769724.24989.920+000386592.6963769724.24989.920+000386592.6963769724.24989.92- <td< td=""><td>Riverside</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Riverside											
$\begin{tabular}{ c c c c c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Train	type			of trai		Speed				1
Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km 1					day		night			Max		-
Station X Y Z type radius reflections Emission level day indite km - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>												
km [dB] [dB] [dB] [dB] [day night 0+000 386823.638 3769577.065 89.26 -							1					
0+000 386823.638 3769577.065 89.26 -		Х	Y	Z	••					;		1
0+256 386635.696 3769718.031 91.31 -							-	-	[dB]		day	night
North4 Rail track: Direction: Section: 46 Km: 0+000 Train type Number of trains Speed Length per train Max day night day night km/h m Max day night Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km 0+000 386592.696 3769724.249 89.92 - - - - -									-		-	-
Train type Number of trains Speed Length per train Max Emission level day night might Max day night Max day night Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km 0+000 386592.696 3769724.249 89.92 -				91.31				-	-		-	-
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$								Speed	Longth por		Emiooi	
Image: mark text of track axis Track Km/h m dB(A) dB(A) Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km Image: mark text of track axis Image: mark text of track axis		IIdii	туре			01 traii		Speed		Mox		1
Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level km [dB] [dB] [dB] [dB] day night 0+000 386592.696 3769724.249 89.92 - - - -					uay		nign	km/b		IVIAX	-	-
Station X Y Z type radius reflections Emission level km - - [dB] [dB] [dB] day night 0+000 386592.696 3769724.249 89.92 - - - - - -	Track	Co	ordinates of track axis		Track		Cu				()	
km [dB] [dB] [dB] day night 0+000 386592.696 3769724.249 89.92 - <td></td> <td></td> <td></td> <td>7</td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>				7					•			
0+000 386592.696 3769724.249 89.92			•	-								1
		386592.696	3769724,249	89.92				-				
0+595 386894.000 3770187.092 91.44	0+595		3770187.092	91.44	-			-	-		-	-
South5_noHSR Rail track: Direction: Section: 47 Km: 0+000	South5_noHSR	F	Rail track: Direction:		Section: 47		Km: 0+000					
Train type Number of trains Speed Length per Emission level		Train	type		Number	of trai	ns	Speed	Length per		Emissi	on level
									train	Max	day	night
km/h m dB(A) dB(A)							-	km/h	m		dB(A)	dB(A)
										-		63.8
0 30 14 32 203 - 64.5 63.4				0						<u> </u>		
Track Coordinates of track axis Track Curve Multiple Corrected				_					•			
Station X Y Z type radius reflections Emission level		Х	Y	Z	•••							1
												night
0+000 386460.712 3767860.643 79.58					-			-	-		-	-
	0+290	300417.138	3/00147.017	60.77	-		1	-	-		-	-

Loop2	R	Rail track: Direction:		Section: 48	Km: 0+000				-	
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	0	32	203	-	64.5	
Track		ordinates of track axis	-	Track		urve	Multiple			ected
Station	Х	Y	Z	type		dius	reflections			ion level
km	000000 700	0700000 557	00.55	[dB]		dB]	[dB]		day	night
0+000 0+037	386630.738 386663.231	3769696.557 3769678.137	90.55 90.50	-		-	-		-	-
South5_noHSR		Rail track: Direction:	90.30	Section: 49	Km: 0+000	-	-		-	-
	Train			Number		Speed	Length per		Emissi	on level
	ITain	туре		day	night	Opeed	train	Max	day	night
				uay	night	km/h	m	Max	dB(A)	dB(A)
			0	89	16	32	151	-	69.0	63.8
			0	30	14	32	203	-	64.5	63.4
Track	Co	ordinates of track axis		Track	Cı	urve	Multiple		Corr	rected
Station	Х	Y	Z	type		dius	reflections	;	Emissi	on level
km				[dB]	[0	dB]	[dB]		day	night
0+000	386456.132	3767859.838	79.84	-		-	-		-	-
0+177 South5_noHSR	386425.543	3768034.133 Rail track: Direction:	80.77	Section: 50	Km: 0+000	-	-		-	-
	Train			Number		Speed	Length per		Emissi	on level
	Train	type		day	night	Opeed	train	Max	day	night
				day	night	km/h	m	Max	dB(A)	dB(A)
			0	89	16	32	151	-	69.0	63.8
			0	30	14	32	203	-	64.5	63.4
Track	Co	ordinates of track axis		Track	Cı	urve	Multiple		Corr	rected
Station	Х	Y	Z	type	rad	dius	reflections	;	Emissi	ion level
				[dB]	[0	dB]	[dB]		day	night
km			80.77	-		-	-		-	-
km 0+000 0+116	386425.610 386412.591	3768034.139 3768149.464	80.77	-		-				

Throat7	R	ail track: Direction:		Section: 51	ł	(m: 0+000					
	Train	type		Number	of train	IS	Speed	Length per		Emissi	on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	36		8	32	151	-	65.1	60.7
			0	11	<u> </u>	0	32	203	-	60.3	-
Track		ordinates of track axis	_	Track		Cu		Multiple			ected
Station	Х	Y	Z	type		rad		reflections			on level
km				[dB]		[dl	-	[dB]		day	night
0+000 0+104	386178.905	3769394.567	91.92 91.92	-		-		-		-	-
Throat7_HSR	386134.905	ail track: Direction:	91.92	Section: 52		- (m: 0+000	·	-		-	-
IIIIUal/_HSK											
	Train	туре		Number			Speed	Length per	M		on level
				day		night	lune //n	train	Max	day	night
			0	64		10	km/h 32	m 175	-	dB(A) 55.0	dB(A) 49.2
Track	Co	ordinates of track axis	0	Track		Cui		Multiple	-		ected
Station	x	Y	z	type		rad		reflections			on level
km	~	ľ	2	[dB]		[dl		[dB]		day	night
0+000	386174.760	3769396.376	89.92	-			-	-		-	-
0+152	386110.318	3769258.991	91.92	-		-		-		-	-
Throat7		ail track: Direction:		Section: 53	۲	Km: 0+000				-	
	Train	type		Number			Speed	Length per			on level
				day		night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	36		8	32	151	-	65.1	60.7
Track	Co	ordinates of track axis	0	11 Track		0 Cui	32	203 Multiple	-	60.3	ected
Station	X		z	type		rad		reflections			on level
km	Λ	1	2	[dB]		[dl		[dB]		day	night
0+000	386207.420	3769444.399	89.92	[UD] -		-	-	-		-	
0+420	386491.280	3769703.788	89.92	-		-		-		-	-
0+420	386491.280	3769703.788	89.92	-	I	-		-		-	-

Throat7	R	ail track: Direction:		Section: 54	Km: 0+0	00				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
		-77		day	night		train	Max	day	night
				,		km/h	m	1	dB(A)	dB(A)
			0	36	8	32	151	-	65.1	60.7
			0	11	0	32		-	60.3	-
Track	1	ordinates of track axis		Track		Curve	Multiple			ected
Station	X	Y	Z	type		radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386207.338	3769444.437	89.92	-		-	-		-	-
0+070	386178.406	3769381.047	91.92	-		-	-	_	-	-
LAUS_12		ail track: Direction:		Section: 55	Km: 0+0				-	
	Train	type			of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	22 7	4	16	-	-	65.8	61.0
Track	Cor	ordinates of track axis	0	/ Track		16 Curve	Multiple	-	60.9	ected
Station	x		z	type		radius	reflections			on level
km	~	ľ	2	[dB]		[dB]	[dB]	5	day	night
0+000	386177.817	3769354.950	91.92	-		-	[0D]		Gay	-
0+075	386203.614	3769425.526	89.92	_		_	_		-	-
LAUS_12		ail track: Direction:		Section: 56	Km: 0+0	00				•
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	22	4	16		-	65.8	61.0
	-		0	7	0	16		-	60.9	-
Track	1	ordinates of track axis	_	Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-	-		-	-
0+532	386109.172	3768903.494	93.32	-	I	-	-		I -	I -

LAUS_12	F	ail track: Direction:		Section: 57	Km: 0+000)				
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	22	4	16	151	-	65.8	61.0
i			0	7	0	16	203	-	60.9	-
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386203.614	3769425.526	89.92	-		-	-		-	-
0+532	386121.048	3768901.251	93.10	-		-	-	_	-	-
LAUS12		ail track: Direction:		Section: 58	Km: 0+000			1		
	Train	type		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	32	5	16	175	-	49.3	43.5
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type	1	radius	reflections	6		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386044.035	3768914.069	93.78	-		-	-		-	-
0+399	386134.905	3769300.687	91.92	-		-	-	_	-	-
LAUS12		ail track: Direction:		Section: 59	Km: 0+000		-			
	Train	type		Number	of trains	Speed	Length per			on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
L,			0	32	5	16	175	-	49.3	43.5
Track		ordinates of track axis		Track		Curve	Multiple			ected
Station	Х	Y	Z	type		radius	reflections	5		on level
km				[dB]		[dB]	[dB]		day	night
0+000	386039.054	3768912.182	93.75	-		-	-		-	-
0+354	386110.318	3769258.991	91.92	-		-	-		-	-

LAUS12	Rail tr	ack: Direction:		Section: 60	Km: 0+000)				
	Train type			Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	32	5	16	175	-	49.3	43.5
Track	Coordin	ates of track axis		Track	(Curve	Multiple		Corr	ected
Station	X	Y	Z	type	r	adius	reflections	6	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386110.318	3769258.991	91.92	-		-	-		-	-
0+358	386026.567	3768912.709	93.81	-		-	-		-	-
GoldNB_Reloc	Rail tr	ack: Direction:		Section: 61	Km: 0+000	1				
	Train type			Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Track	Coordin	ates of track axis		Track	(Curve	Multiple		Corr	ected
Station	X	Y	Z	type	r	adius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386006.651	3768862.937	91.29	-		-	-		-	-
0+853	385999.210	3769650.932	88.37	-		-	-		-	-
GoldSB_Reloc	Rail tr	ack: Direction:		Section: 62	Km: 0+000	1				
	Train type			Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
Track	Coordin	ates of track axis		Track	(Curve	Multiple		Corr	ected
Station	X	Y	Z	type	r	adius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386001.861	3768863.845	89.92	-		-	-		-	-
0+848	385995.788	3769646.440	88.31	-		-	-		-	-
Loop2	Rail tr	ack: Direction:		Section: 63	Km: 0+000	1				
	Train type)		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
					•	km/h	m		dB(A)	dB(A)
			0	30	0	32	203	-	64.5	-
Track	Coordin	ates of track axis		Track	(Curve	Multiple		Corr	ected
Station	X	Y	Z	type	r	adius	reflections	5	Emissi	on level
km				[dB]		[dB]	[dB]		day	night
0+000	386731.600	3769516.995	89.92	-		-	-		-	-
0+000										

NE_5trk	Rai	il track: Direction:		Section: 64	Km: 0+000					
	Train ty	/pe		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	60	13	32	151	-	67.3	63.0
i			0	19	0	32	203	-	62.5	-
Track		dinates of track axis		Track		rve	Multiple			ected
Station	X	Y	Z	type		lius	reflections		Emissi	on level
km				[dB]	[d	B]	[dB]		day	night
0+000	386527.929	3769722.157	89.92	-		-	-		-	-
0+080	386607.050	3769730.723	89.92	-			-		-	-
NE_5trk		il track: Direction:		Section: 65	Km: 0+000					
	Train ty	/pe		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	60	13	32	151	-	67.3	63.0
			0	19	0	32	203	-	62.5	-
Track	1	dinates of track axis		Track		rve	Multiple			ected
Station	X	Y	Z	type		lius	reflections		Emissi	on level
km				[dB]	[d	B]	[dB]		day	night
0+000	386528.159	3769717.272	89.92	-		-	-		-	-
0+065	386592.696	3769724.249	89.92	-		-	-		-	-
North4		il track: Direction:		Section: 66	Km: 0+000					
	Train ty	/pe		Number	of trains	Speed	Length per		Emissi	on level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
									-	
Track	Coord	dinates of track axis		Track	Cu	rve	Multiple		Corre	ected
Track Station	Coord X	rdinates of track axis	Z	Track type		rve lius	Multiple reflections			ected on level
		1	Z		rac					
Station		1	Z 89.92 91.44	type	rac [d	lius	reflections		Emissi	on level

Throat7 Track Station X km 0+221 3	386203.614 Rail track Train type	es of track axis Y 3769425.526	0 0 Z 89.92	Section: 67 Number of day 36 11 Track type [dB] - Section: 68 Number of day	night 8 0 Cu rac [d Km: 0+221	Speed km/h 32 32 rve lius B] Speed	Length per train m 151 203 Multiple reflections [dB] - - Length per train	Max yes -	Emissio day dB(A) 65.1 60.3 Corre Emissio day - Emissio day	night dB(A) - ected on level night -
StationXkm0+00033Throat77TrackStationXkm0+2213	Coordinate 386203.614 Rail track Train type	Y 3769425.526	0 Z 89.92	day 36 11 Track type [dB] - Section: 68 Number of	night 8 0 Cu rac [d Km: 0+221 of trains	km/h 32 32 rve lius B] 	train m 151 203 Multiple reflections [dB] - Length per	yes -	day dB(A) 65.1 60.3 Corre Emissio day - Emissio	night dB(A) 60.7 - ected on level night - on level
StationXkm0+0003Throat77TrackXStationXkm0+2213	386203.614 Rail track Train type	Y 3769425.526	0 Z 89.92	36 11 Track type [dB] Section: 68 Number	8 0 Cu rac [d Km: 0+221 of trains	32 32 rve lius B] - Speed	m 151 203 Multiple reflections [dB] - Length per	- -	dB(A) 65.1 60.3 Corre Emissio day - Emissio	dB(A) - ected on level - on level
StationXkm0+0003Throat77TrackXStationXkm0+2213	386203.614 Rail track Train type	Y 3769425.526	0 Z 89.92	11 Track type [dB] - Section: 68 Number of	0 Cu rac [d Km: 0+221 of trains	32 rve lius B] 	203 Multiple reflections [dB] - Length per	- -	65.1 60.3 Corre Emissie day - Emissie	- ected on level night -
StationXkm0+00033Throat77TrackStationXkm0+2213	386203.614 Rail track Train type	Y 3769425.526	Z 89.92	Track type [dB] Section: 68 Number	Cu rac [d Km: 0+221 of trains	rve lius B] Speed	Multiple reflections [dB] - Length per		Corre Emissio day - Emissio	on level - -
StationXkm0+00033Throat77TrackStationXkm0+2213	386203.614 Rail track Train type	Y 3769425.526	89.92	type [dB] - Section: 68 Number of	Km: 0+221	lius B] 	reflections [dB] - Length per		Emissio day - Emissio	on level - -
km 0+000 3 Throat7 Track Station km 0+221 3	386203.614 Rail track Train type	3769425.526	89.92	[dB] - Section: 68 Number o	Km: 0+221	B] Speed	[dB] - Length per		day - Emissio	night -
0+000 3 Throat7 Track Station X km 0+221 3	Rail track Train type	· · · · · ·		Section: 68 Number	Km: 0+221 of trains	Speed	- Length per	Мах	- Emissio	- on level
Throat7 Track Station Km 0+221 3	Rail track Train type	· · · · · ·		Section: 68 Number	Km: 0+221 of trains	Speed		Max		
Track Station X km 0+221 3	Train type	k: Direction:	0	Number	of trains			Max		
Station X km 0+221 3			0	1				Max		
Station X km 0+221 3	Coordinate		0	day	night		train	Max	dav	night
Station X km 0+221 3	Coordinate		0						aay	
Station X km 0+221 3	Coordinate		0			km/h	m		dB(A)	dB(A)
Station X km 0+221 3	Coordinate		-	36	8	32	151	-	65.1	60.7
Station X km 0+221 3	Coordinata		0	11	0	32	203	-	60.3	
km 0+221 3	1	es of track axis		Track		rve	Multiple		Corre	
0+221 3		Y	Z	type		lius	reflections		Emissio	1
				[dB]	[d	B]	[dB]		day	night
0+436 3	386300.889	3769623.792	89.92	-		-	-		-	-
	386493.600	3769699.206	89.92	-			-		-	-
Loop2_Horn	Rail track	: Direction:		Section: 69	Km: 0+030					
	Train type			Number		Speed	Length per		Emissio	
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	30	0	32	203	-	64.5	-
Track	1	es of track axis		Track		rve	Multiple		Corre	
Station X		Y	Z	type		lius	reflections		Emissio	1
km				[dB]	[d	B]	[dB]		day	night
	386663.160	3769662.289	90.02	-		-	-		-	-
0+074 3	886625.852	3769686.136	90.11	-		-	-	l	-	-

ThroatExit_S_W of	River w Horn R	ail track: Direction:		Section: 70	Km: 0+	+000		1			
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	13	0		32	203	yes	77.9	-
Track	1	ordinates of track axis		Track		Curv		Multiple			ected
Station	X	Y	Z	type		radiu	-	reflections	5		on level
km				[dB]		[dB]		[dB]		day	night
0+000 0+098	386625.852 386530.357	3769686.136 3769701.484	90.11 89.92	-		-		-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 71	Km: 0+	+000	1				
	Train	type			of trains		Speed	Length per		Emissi	on level
		.)po		day	night		opood	train	Max	day	night
				uuy	l		km/h	m		dB(A)	dB(A)
			0	13	0		32	203	ves	77.9	-
Track	Cod	ordinates of track axis		Track		Curv	-	Multiple			ected
Station	X	Y	Z	type		radiu	IS	reflections	;	Emissi	on level
km				[dB]		[dB]		[dB]		day	night
0+000	386663.431	3769678.014	90.52	-		-		-		-	-
0+127	386722.216	3769569.318	89.92	-		-		-		-	-
ThroatExit_S_W of	River w Horn R	ail track: Direction:		Section: 72	Km: 0+	+000					
	Train	type		Number	of trains		Speed	Length per		Emissi	on level
				day	night			train	Max	day	night
							km/h	m		dB(A)	dB(A)
			0	13	0		32	203	yes	77.9	-
Track	1	ordinates of track axis		Track		Curv		Multiple			ected
Station	X	Y	Z	type		radiu		reflections	5		on level
km				[dB]		[dB]		[dB]		day	night
0+000	386715.203	3769579.068	89.92	-		-		-		-	-
0+061 ThroatExit_S_W of	386689.207	3769634.305 ail track: Direction:	90.24	Section: 73	Km: 0+	-		-		-	-
	Train				of trains	1000	Speed	Length per		Emicoi	on level
	Train	type		day	night		Speed	train	Max	day	night
				uay	night		km/h	m	IVIAN	dB(A)	dB(A)
			0	13	0		32	203	ves	77.9	- uB(A)
Track	Co	ordinates of track axis	5	Track		Curv		Multiple	,		ected
Station	X	Y I	Z	type		radiu		reflections	;		on level
km				[dB]		[dB]		[dB]		day	night
0+000	386530.098	3769706.166	89.92	-		-		-		-	-
0+102	386630.738	3769696.557	90.55	-		-		-			

ThroatExit_S_W of		ail track: Direction:		Section: 74	Km: 0+000	-	1	· · · · ·		
	Train	type		Number		Speed	Length per			ion level
				day	night		train	Max	day	night
				10	-	km/h	m		dB(A)	dB(A)
Treat	0		0	<u>13</u>	0	32	203	yes	77.9	-
Track	1	ordinates of track axis	7	Track		urve	Multiple			rected
Station	X	Ŷ	Z	type		idius	reflections	5		ion level
km 0+000	386491.286	3769703.728	89.92	[dB]	l	dB]	[dB]		day -	night
0+000	386530.098	3769705.128	89.92 89.92	-		-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 75	Km: 0+000	I				
	Train			Number		Speed	Length per		Emiss	ion level
		-77		day	night		train	Max	day	night
					5	km/h	m		dB(A)	dB(A)
			0	13	0	32	203	yes	77.9	-
Track	Coo	ordinates of track axis		Track	C	urve	Multiple		Corr	rected
Station	Х	Y	Z	type	ra	dius	reflections	;	Emiss	ion level
km				[dB]	[dB]	[dB]		day	night
0+000	386530.357	3769701.484	89.92	-		-	-		-	-
0+037	386493.600	3769699.206	89.92	-		-	-		-	-
		· · · · · · · · · · · · · · · · · · ·								
ThroatExit_S_W of	f River w Horn R	ail track: Direction:		Section: 76	Km: 0+000	•	1			
ThroatExit_S_W of	f River w Horn R Train			Section: 76 Number		Speed	Length per		Emiss	ion level
ThroatExit_S_W of						Speed	Length per train	Max	day	night
ThroatExit_S_W of				Number day	of trains night	km/h	train m		day dB(A)	night dB(A)
	Train	type	0	Number day 13	of trains night	km/h	train m 203	Max yes	day dB(A) 77.9	night dB(A)
Track	Train	type ordinates of track axis	-	Number day 13 Track	of trains night 0 C	km/h 32 urve	train m 203 Multiple	yes	day dB(A) 77.9 Corr	night dB(A) - rected
Track Station	Train	type	0 Z	Number day 13 Track type	of trains night 0 C ra	km/h 32 urve idius	train m 203 Multiple reflections	yes	day dB(A) 77.9 Con Emiss	night dB(A) rected ion level
Track Station km	Train Coo X	type ordinates of track axis Y	Z	Number day 13 Track type [dB]	of trains night 0 C ra	km/h 32 urve idius dB]	train m 203 Multiple	yes	day dB(A) 77.9 Corr	night dB(A) - rected
Track Station km 0+000	Train Cox X 386721.464	type ordinates of track axis Y 3769547.605	Z 89.92	Number day 13 Track type	of trains night 0 C ra	km/h 32 urve idius	train m 203 Multiple reflections	yes	day dB(A) 77.9 Con Emiss	night dB(A) rected ion level
Track Station km 0+000 0+032	Train Coo X 386721.464 386715.197	type ordinates of track axis Y 3769547.605 3769579.095	Z	Number day 13 Track type [dB]	of trains night 0 C ra	km/h 32 urve idius dB]	train m 203 Multiple reflections	yes	day dB(A) 77.9 Corr Emiss day	night dB(A) rected ion level
Track Station km 0+000	Train Coo X 386721.464 386715.197 f River w Horn R	type ordinates of track axis Y 3769547.605 3769579.095 ail track: Direction:	Z 89.92	Number day 13 Track type [dB] - Section: 77	of trains night 0 C ra [] Km: 0+000	km/h 32 urve dius dB]	train m 203 Multiple reflections [dB] -	yes	day dB(A) 77.9 Corr Emiss day - -	night dB(A) - rected ion level night - -
Track Station km 0+000 0+032	Train Coo X 386721.464 386715.197	type ordinates of track axis Y 3769547.605 3769579.095 ail track: Direction:	Z 89.92	Number day 13 Track type [dB] Section: 77 Number	of trains night 0 C ra [[Km: 0+000 of trains	km/h 32 urve idius dB]	train m 203 Multiple reflections [dB] - - Length per	yes	day dB(A) 77.9 Corr Emiss day - - Emiss	night dB(A) - rected ion level - - -
Track Station km 0+000 0+032	Train Coo X 386721.464 386715.197 f River w Horn R	type ordinates of track axis Y 3769547.605 3769579.095 ail track: Direction:	Z 89.92	Number day 13 Track type [dB] - Section: 77	of trains night 0 C ra [] Km: 0+000	km/h 32 urve dius dB] Speed	train m 203 Multiple reflections [dB] - - Length per train	yes	day dB(A) 77.9 Corr Emiss day - - Emiss day	night dB(A) - rected ion level night - - - ion level night
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Track Station km 0+000 0+032 ThroatExit_S_W of ThroatExit_S_W of	Train Cor X 386721.464 386715.197 f River w Horn R Train Cor	type ordinates of track axis Y 3769547.605 3769579.095 ail track: Direction: type	Z 89.92 89.92	Number day 13 Track type [dB] - - Section: 77 Number day 13 Track	of trains night 0 C ra [[Km: 0+000 of trains night 0 C ra	km/h 32 urve dius dB] Speed km/h 32 urve	train m 203 Multiple reflections [dB] - - - Length per train m 203 Multiple	yes Max yes	day dB(A) 77.9 Corr Emiss day - Emiss day dB(A) 77.9 Corr	night dB(A)
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Track Station km 0+000 0+032 ThroatExit_S_W of ThroatExit_S_W of	Train Coo X 386721.464 386715.197 f River w Horn R Train Coo X	type ordinates of track axis Y 3769547.605 3769579.095 ail track: Direction: type ordinates of track axis Y	Z 89.92 89.92 0 Z	Number day 13 Track type [dB] - - Section: 77 Number day 13 Track type [dB]	of trains night 0 C ra [[Km: 0+000 of trains night 0 C ra	km/h 32 urve dius dB] Speed km/h 32 urve dius dB]	train m 203 Multiple reflections [dB] - - - - - - - - - - - - - - - - - - -	yes Max yes	day dB(A) 77.9 Corr Emiss day - - Emiss day dB(A) 77.9 Corr Emiss	night dB(A) - rected ion level - - - - - - - - - - - - - - - - - - -

Train type Number of trains day Speed (might) Length per (might) Max (might) Emission level (might) Track Coordinates of track axis 0 78 20 32 1776 77.7 Track Coordinates of track axis Track Curve Multiple Corrected Emission level Mm X Y Z type radus mellections Emission level Mm 386693.999 3770197.066 90.81 -	Ventura, LOSSAN,	, Coast Starlight 2 R	ail track: Direction:		Section: 78	Km: 0+000					
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km				_							
0+000 0+333 386893.999 3870507.725 3770507.725 90.81 - - - - </td <td></td> <td>Х</td> <td>Y</td> <td>Z</td> <td></td> <td></td> <td></td> <td></td> <td>6</td> <td></td> <td>i i i</td>		Х	Y	Z					6		i i i
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Train type Number of trains day Speed night Length per train Max Max Emission level day Max 0 100 3 332 203 yes 76.7 73.7 0 78 20 32 120.5 55.9 52.2 Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission level wm 0 386689.614 3770188.507 91.05 -				-	- Contiant 70			-		-	-
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day night train Max day night km/h m Max day night dB(A)	ThroatExit_S_W of	f River R	ail track: Direction:		Section: 80	Km: 0+000					
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Station kmXYZtype (dB)radius (dB)reflections (dB)Emission level0+000386625.8523769686.13690.110+098386530.3573769701.48489.92				0					yes		
km [dB] [dB] [dB] day night 0+000 386625.852 3769686.136 90.11 - - - - 0+098 386530.357 3769701.484 89.92 - - - - -	Track		1			0	Curve	Multiple			
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0+098 386530.357 3769701.484 89.92								[dB]		day	night
	0+000									-	-
1/9/2020	0+098	386530.357	3769701.484	89.92	-	I	-	-		-	-
1/9/2020											
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Image: Construct of track axis 0 17 0 32 203 yes 62.0 Track Coordinates of track axis Track Curve Multiple Multiple Corrected Station X Y Z type radius reflections Emission leve km 0+000 386663.431 3769678.014 90.52 -	night dB(A) - - el night - -
day night train Max day image: mark train	night dB(A) - el night - - - -
km/h m dB(A) Mark 0 17 0 32 203 yes 62.0 100 Track Coordinates of track axis Track Curve Multiple Corrected Station X Y Z type radius reflections Emission leve km 0 386663.431 3769678.014 90.52 -	dB(A) - night - - -
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TrackCoordinates of track axisTrackCurveMultipleCorrectedStationXYZtyperadiusreflectionsEmission levekm111111110+000386663.4313769678.01490.520+127386722.2163769569.31889.92ThroatExit_S_W of RiverRail track:Direction:Section: 82Km: 0+000SpeedLength per trainEmission leveTrain typeNumber of trains daySpeedLength per trainEmission leve dayO17032203yes62.0	el night - - el night
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0 17 0 32 203 yes 62.0	dB(A)
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Station X Y Z type radius reflections Emission level	ŧ
km [dB] [dB] [dB] day	night
0+000 386715.203 3769579.068 89.92	-
0+061 386689.207 3769634.305 90.24	-
ThroatExit_S_W of River Rail track: Direction: Section: 83 Km: 0+000	
Train type Number of trains Speed Length per Emission leve	
day night train Max day	night
	dB(A)
0 17 0 32 203 yes 62.0	-
Track Coordinates of track axis Track Curve Multiple Corrected	
Station X Y Z type radius reflections Emission level	
km [dB] [dB] [dB] day	night
0+000 386530.098 3769706.166 89.92	-
ThroatExit_S_W of River Rail track: Direction: Section: 84 Km: 0+000	
Train type Number of trains Speed Length per Emission level	
day night train Max day	night
	dB(A)
0 17 0 32 203 yes 62.0	-
Track Coordinates of track axis Track Curve Multiple Corrected	
Station X Y Z type radius reflections Emission level	ł
km [dB] [dB] [dB] day	night
0+000 386491.286 3769703.728 89.92	-
0+039 386530.098 3769706.166 89.92	-

ThroatExit_S_W of	f River R	ail track: Direction:		Section: 85	Kr	m: 0+000					
	Train	type		Number	of trains	;	Speed	Length per		Emissi	on level
		-71		day	1	night		train	Max	day	night
				,		0	km/h	m		dB(A)	dB(A)
			0	17		0	32	203	yes	62.0	-
Track	Co	ordinates of track axis		Track		Cu	irve	Multiple		Corr	ected
Station	Х	Y	Z	type		rac	lius	reflections	6	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386530.357	3769701.484	89.92	-			-	-		-	-
0+037	386493.600	3769699.206	89.92	-			-	-		-	-
ThroatExit_S_W of		ail track: Direction:		Section: 86		m: 0+000		1			
	Train	type			of trains		Speed	Length per			on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
_			0	17		0	32	203	yes	62.0	-
Track	1	ordinates of track axis	-	Track			rve	Multiple			ected
Station	Х	Y	Z	type			lius	reflections	5		on level
km	000704 404	07005 (7.005		[dB]		[d	B]	[dB]		day	night
0+000 0+032	386721.464 386715.197	3769547.605 3769579.095	89.92 89.92	-			-	-		-	-
ThroatExit_S_W of		ail track: Direction:	09.92	Section: 87	Kr	m: 0+000	-			-	-
	Train	type		Number	of trains	;	Speed	Length per		Emissi	on level
				day	n	night		train	Max	day	night
						-	km/h	m		dB(A)	dB(A)
			0	30		0	32	203	yes	64.5	-
Track	Co	ordinates of track axis		Track		Cu	irve	Multiple		Corr	ected
Station	Х	Y	Z	type			lius	reflections	;	Emissi	on level
km				[dB]		[d	B]	[dB]		day	night
0+000	386689.207	3769634.305	90.24	-			-	-		-	-
0+038	386663.062	3769662.269	90.04	-			-	-		-	-
HSR_2trk_West of	NW Merge with SBL/AnR			Section: 88		m: 0+272		1			
	Train	type			of trains		Speed	Length per			on level
				day	n	night		train	Max	day	night
							km/h	m		dB(A)	dB(A)
T. 1			0	64		10	32	175	yes	55.0	49.2
Track	1	ordinates of track axis	-	Track			rve	Multiple			ected
Station	Х	Y	Z	type			lius	reflections	5		on level
km	000000 000	0700746 117	00.00	[dB]		-	B]	[dB]		day	night
0+272	386606.968 386524.324	3769742.417	89.89 89.89	-			-	-		-	-
0+355	300324.324	3769733.414	09.89	-			-	-		-	-

	/ Merge with SBL/AnRail tr			Section: 89	Km: 0+237					
	Train type	e de la companya de l		Number		Speed	Length per			sion level
				day	night		train	Max	day	night
						km/h	m		dB(A)	dB(A)
			0	64	10	32	175	yes	55.0	49.2
Track	Coordir	ates of track axis		Track	Cu	rve	Multiple		Co	rrected
Station	X	Y	Z	type	rad	lius	reflections		Emis	sion level
km				[dB]	[d		[dB]		day	night
0+237	386606.048	3769737.832	90.09	-	-	-	-		-	-
0+323	386520.669	3769727.961	89.92	-	-	-	-		-	-

Appendix B: Monitoring Data and Photos





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Table B-1. Monitoring Locatior	1 1a Acoustic Measurements	\$		
Date	Time	dBA L _{eq}		
01-24-2017	10:00 AM	61.8		
01-24-2017	11:00 AM	63.4		
01-24-2017	12:00 PM	66.1		
01-24-2017	1:00 PM	61.3		
01-24-2017	2:00 PM	65.4		
01-24-2017	3:00 PM	68.2		
01-24-2017	4:00 PM	67.1		
01-24-2017	5:00 PM	66.5		
01-24-2017	6:00 PM	65.6		
01-24-2017	7:00 PM	64.0		
01-24-2017	8:00 PM	64.6		
01-24-2017	9:00 PM	61.3		
01-24-2017	10:00 PM	65.4		
01-24-2017	11:00 PM	63.1		
01-25-2017	12:00 AM	55.0		
01-25-2017	1:00 AM	58.6		
01-25-2017	2:00 AM	58.4		
01-25-2017	3:00 AM	60.1		
01-25-2017	4:00 AM	61.9		
01-25-2017	5:00 AM	63.0		
01-25-2017	6:00 AM	63.9		
01-25-2017	7:00 AM	67.4		
01-25-2017	8:00 AM	68.5		
01-25-2017	9:00 AM	66.3		





Table B-2. Monitoring Locati	on 1b Acoustic Measuremen	ts
Date	Time	dBA L _{eq}
1/24/2017	10:00 AM	72.0
1/24/2017	11:00 AM	64.3
1/24/2017	12:00 PM	66.1
1/24/2017	1:00 PM	65.1
1/24/2017	2:00 PM	61.0
1/24/2017	3:00 PM	66.1
1/24/2017	4:00 PM	64.8
1/24/2017	5:00 PM	63.6
1/24/2017	6:00 PM	63.8
1/24/2017	7:00 PM	62.9
1/24/2017	8:00 PM	69.4
1/24/2017	9:00 PM	65.8
1/24/2017	10:00 PM	67.3
1/24/2017	11:00 PM	57.8
1/25/2017	12:00 AM	55.8
1/25/2017	1:00 AM	58.4
1/25/2017	2:00 AM	56.5
1/25/2017	3:00 AM	56.8
1/25/2017	4:00 AM	58.6
1/25/2017	5:00 AM	60.7
1/25/2017	6:00 AM	61.7
1/25/2017	7:00 AM	62.3
1/25/2017	8:00 AM	69.1
1/25/2017	9:00 AM	65.2





Table B-3. Monitoring Locati	on 2 Acoustic Measurements	5
Date	Time	dBA L _{eq}
1/25/2017	2:00 PM	68.7
1/25/2017	3:00 PM	70.6
1/25/2017	4:00 PM	71.0
1/25/2017	5:00 PM	71.2
1/25/2017	6:00 PM	70.6
1/25/2017	7:00 PM	69.3
1/25/2017	8:00 PM	69.2
1/25/2017	9:00 PM	66.6
1/25/2017	10:00 PM	66.1
1/25/2017	11:00 PM	65.0
1/26/2017	12:00 AM	68.3
1/26/2017	1:00 AM	62.2
1/26/2017	2:00 AM	60.9
1/26/2017	3:00 AM	59.6
1/26/2017	4:00 AM	62.2
1/26/2017	5:00 AM	68.1
1/26/2017	6:00 AM	69.5
1/26/2017	7:00 AM	71.5
1/26/2017	8:00 AM	73.6
1/26/2017	9:00 AM	72.4
1/26/2017	10:00 AM	69.6
1/26/2017	11:00 AM	68.9
1/26/2017	12:00 PM	68.0
1/26/2017	1:00 PM	67.4





Table B-4. Monitoring Locati	on 3 Acoustic Measurements	5
Date	Time	dBA L _{eq}
1/24/2017	1:00 PM	60.9
1/24/2017	2:00 PM	63.5
1/24/2017	3:00 PM	63.5
1/24/2017	4:00 PM	64.7
1/24/2017	5:00 PM	63.8
1/24/2017	6:00 PM	63.1
1/24/2017	7:00 PM	62.3
1/24/2017	8:00 PM	60.4
1/24/2017	9:00 PM	59
1/24/2017	10:00 PM	57.6
1/24/2017	11:00 PM	59.1
1/25/2017	12:00 AM	58
1/25/2017	1:00 AM	61
1/25/2017	2:00 AM	57.2
1/25/2017	3:00 AM	58.1
1/25/2017	4:00 AM	59.6
1/25/2017	5:00 AM	62.5
1/25/2017	6:00 AM	63.4
1/25/2017	7:00 AM	66.4
1/25/2017	8:00 AM	64.6
1/25/2017	9:00 AM	67.1
1/25/2017	10:00 AM	63.4
1/25/2017	11:00 AM	61.4
1/25/2017	12:00 PM	63





Table B-5. Monitoring Locati	on 4 Acoustic Measurements	5
Date	Time	dBA L _{eq}
1/25/2017	11:00 AM	64.2
1/25/2017	12:00 PM	63.2
1/25/2017	1:00 PM	67.2
1/25/2017	2:00 PM	64.7
1/25/2017	3:00 PM	67.3
1/25/2017	4:00 PM	61.8
1/25/2017	5:00 PM	62.0
1/25/2017	6:00 PM	61.3
1/25/2017	7:00 PM	63.7
1/25/2017	8:00 PM	64.9
1/25/2017	9:00 PM	62.3
1/25/2017	10:00 PM	61.0
1/25/2017	11:00 PM	60.9
1/26/2017	12:00 AM	60.0
1/26/2017	1:00 AM	61.8
1/26/2017	2:00 AM	58.2
1/26/2017	3:00 AM	60.5
1/26/2017	4:00 AM	63.6
1/26/2017	5:00 AM	70.7
1/26/2017	6:00 AM	64.0
1/26/2017	7:00 AM	63.8
1/26/2017	8:00 AM	65.0
1/26/2017	9:00 AM	63.8
1/26/2017	10:00 AM	64.0





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Figure B-1. Monitoring Location 1a Noise Meter, #1



Figure B-3. Monitoring Location 1a Noise Meter from Sidewalk, #1



Figure B-2. Monitoring Location 1a Noise Meter, #2



Figure B-4. Monitoring Location 1a Noise Meter from Sidewalk, #2









Figure B-5. Monitoring Location 1a Noise Meter from Street

Figure B-7. Monitoring Location 1b Noise Meter, #2



Figure B-6. Monitoring Location 1b Noise Meter, #1



Figure B-8. Monitoring Location 1b Noise Meter, #3

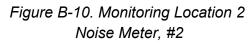












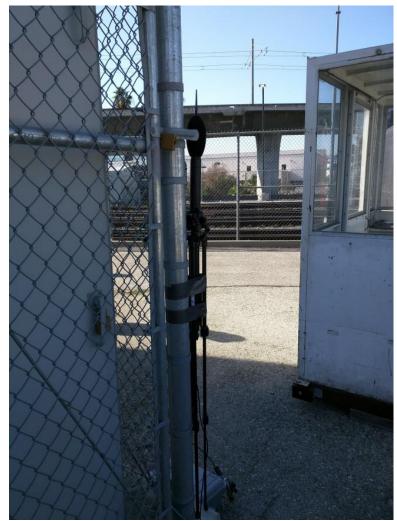






Figure B-11. Monitoring Location 2 Noise Meter, #3



Figure B-12. Monitoring Location 2 Noise Meter, #4







Figure B-15. Monitoring Location 3 Noise Meter, #3



Figure B-17. Monitoring Location 3 Vibration Measurement,



Figure B-16. Monitoring Location 3 Noise Meter View of Tracks



Figure B-18. Monitoring Location 3 Vibration Measurement,









Figure B-19. Monitoring Location 3 Vibration Meter Setup, #1 Figure B-20. Monitoring Location 3 Vibration Meter Setup, #2







Figure B-21. Monitoring Location 4 Noise Meter, #1

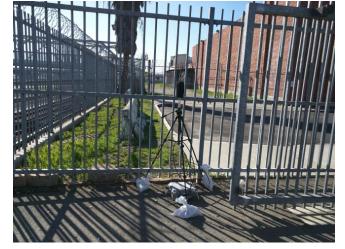


Figure B-22. Monitoring Location 4 Noise Meter, #2





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Appendix C: Detailed Acoustic and Vibration Modeling and Predictions Results





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Table C-1. Operational Noise Levels – Build Alternative (2026) Project Noise Cumulative													
					Project Noise Exposure (dBA L _{dn} or L _{eq})		Absolute Impact Thresholds		Increase in Cum Level Thre	ulative Noise sholds	FTA Level of Noise Impact		
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative		
	WM1	3	1	66	50	67	72	0	2	5	None		
	WM2	2	40	69	51	64	69	0	2	5	None		
	WM3	2	40	69	48	64	69	0	2	5	None		
	WM4	2	12	69	45	64	69	0	2	5	None		
	WM5	2	11	69	49	64	69	0	2	5	None		
	WM6	2	16	69	58	64	69	0	2	5	None		
	WM7	2	38	69	50	64	69	0	2	5	None		
William Mead Homes	WM8	2	24	69	67	64	69	2	2	5	Moderate		
		46	69	49	64	69	0	2	5	None			
	WM10	2	20	69	51	64	69	0	2	5	None		
	WM11	2	40	69	46	64	69	0	2	5	None		
	WM12	2	40	69	45	64	69	0	2	5	None		
	WM13	2	32	69	45	64	69	0	2	5	None		
	WM14	2	40	69	51	64	69	0	2	5	None		
	WM15	2	16	69	47	64	69	0	2	5	None		
	PK1	3	1	66	62	67	72	2	2	5	None		
	HFC1	2	5	73	59	65	70	0	2	5	None		
	HFC2	2	5	73	59	65	70	0	2	5	None		
Care First Village	HFC3	2	5	73	56	65	70	0	2	5	None		
	HFC4	2	5	73	54	65	70	0	2	5	None		
	HFC5	2	5	73	50	65	70	0	2	5	None		





Table C-1. Operational	Table C-1. Operational Noise Levels – Build Alternative (2026)													
					Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thresh	Impact olds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increase in Cum Level Thre	ulative Noise sholds	FTA Level of Noise Impact			
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative			
	HFC6	2	5	73	50	65	70	0	2	5	None			
	HFC7	2	5	73	46	65	70	0	2	5	None			
	HFC8	2	5	73	49	65	70	0	2	5	None			
	HFC9	2	5	73	45	65	70	0	2	5	None			
	HFC10	2	5	73	44	65	70	0	2	5	None			
	HFC13	2	20	73	46	65	70	0	2	5	None			
	HFC13	2	20	73	46	65	70	0	2	5	None			
	HFC13	2	20	73	46	65	70	0	2	5	None			
	HFC16	2	24	73	47	65	70	0	2	5	None			
	HFC16	2	24	73	47	65	70	0	2	5	None			
	HFC16	2	24	73	47	65	70	0	2	5	None			
	HFC17	0	0	73	52	65	70	0	2	5	None			
	HFC18	2	5	73	53	65	70	0	2	5	None			
	HFC19	2	5	73	53	65	70	0	2	5	None			
	HFC20	2	5	73	49	65	70	0	2	5	None			
	HFC21	2	5	73	51	65	70	0	2	5	None			
	HFC22	2	5	73	44	65	70	0	2	5	None			
	HFC23	2	5	73	43	65	70	0	2	5	None			
	HFC24	2	5	73	43	65	70	0	2	5	None			
	HFC25	2	5	73	43	65	70	0	2	5	None			
	HFC26	2	5	73	42	65	70	0	2	5	None			





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Table C-1. Operational	Noise Levels	s – Build Alter	native (2026)		1						
					Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thresh	Impact olds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increase in Cum Level Thre	ulative Noise sholds	FTA Level of Noise Impact
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative
	HFC27	2	5	73	43	65	70	0	2	5	None
	HFC28	3	1	71	54	75	80	0	3	5	None
Metro Senior Housing	MT1	2	123	60	45	58	63	0	2	5	None
Los Angeles County Men's Central Jail	CJ1	2	4000	73	49	66	71	0	2	5	None
Twin Towers Correctional Facility	TT1	2	9500	73	50	66	71	0	2	5	None
	MA12a	2	3	67	55	63	67	0	2	5	None
	MA13a	2	3	67	53	63	67	0	2	5	None
	MA14a	2	3	67	51	63	67	0	2	5	None
	MA15a	2	3	67	49	63	67	0	2	5	None
	MA1a	2	3	67	52	63	67	0	2	5	None
	MA2a	2	3	67	51	63	67	0	2	5	None
	MA3a	2	3	67	49	63	67	0	2	5	None
Mozaic Apartments East Building	MA4a	2	3	67	48	63	67	0	2	5	None
	MA5a	2	3	67	46	63	67	0	2	5	None
	MA11a	2	3	67	43	63	67	0	2	5	None
	MA10a	2	3	67	44	63	67	0	2	5	None
	MA9a	2	3	67	44	63	67	0	2	5	None
	MA8a	2	3	67	45	63	67	0	2	5	None
	MA7a	2	3	67	45	63	67	0	2	5	None
	MA6a	2	3	67	46	63	67	0	2	5	None





Table C-1. Operational	Table C-1. Operational Noise Levels – Build Alternative (2026)													
					Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thresh	Impact olds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increase in Cumulative Noise Level Thresholds		FTA Level of Noise Impact			
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative			
	MA12b	2	3	67	56	63	67	0	2	5	None			
	MA13b	2	3	67	54	63	67	0	2	5	None			
	MA14b	2	3	67	52	63	67	0	2	5	None			
	MA15b	2	3	67	50	63	67	0	2	5	None			
	MA1b	2	3	67	55	63	67	0	2	5	None			
	MA2b	2	3	67	52	63	67	0	2	5	None			
	MA3b	2	3	67	50	63	67	0	2	5	None			
	MA4b	2	3	67	49	63	67	0	2	5	None			
	MA5b	2	3	67	47	63	67	0	2	5	None			
	MA11b	2	3	67	43	63	67	0	2	5	None			
	MA10b	2	3	67	44	63	67	0	2	5	None			
	MA9b	2	3	67	44	63	67	0	2	5	None			
	MA8b	2	3	67	45	63	67	0	2	5	None			
	MA7b	2	3	67	45	63	67	0	2	5	None			
	MA6b	2	3	67	46	63	67	0	2	5	None			
	MA12c	2	3	67	57	63	67	0	2	5	None			
	MA13c	2	3	67	55	63	67	0	2	5	None			
	MA14c	2	3	67	54	63	67	0	2	5	None			
	MA15c	2	3	67	51	63	67	0	2	5	None			
	MA1c	2	3	67	56	63	67	0	2	5	None			
	MA2c	2	3	67	53	63	67	0	2	5	None			





Table C-1. Operational	Fable C-1. Operational Noise Levels – Build Alternative (2026) Project Noise Cumulative													
					Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thresh	Absolute Impact Thresholds		Absolute Impact Thresholds		Increase in Cum Level Thre	ulative Noise sholds	FTA Level of Noise Impact	
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative			
	MA3c	2	3	67	51	63	67	0	2	5	None			
	MA4c	2	3	67	49	63	67	0	2	5	None			
	MA5c	2	3	67	48	63	67	0	2	5	None			
	MA11c	2	3	67	43	63	67	0	2	5	None			
	MA10c	2	3	67	44	63	67	0	2	5	None			
	MA9c	2	3	67	44	63	67	0	2	5	None			
	MA8c	2	3	67	45	63	67	0	2	5	None			
	MA7c	2	3	67	45	63	67	0	2	5	None			
	MA6c	2	3	67	46	63	67	0	2	5	None			
	MA12d	2	3	67	58	63	67	0	2	5	None			
	MA13d	2	3	67	55	63	67	0	2	5	None			
	MA14d	2	3	67	54	63	67	0	2	5	None			
	MA15d	2	3	67	53	63	67	0	2	5	None			
	MA1d	2	3	67	57	63	67	0	2	5	None			
	MA2d	2	3	67	54	63	67	0	2	5	None			
	MA3d	2	3	67	52	63	67	0	2	5	None			
	MA4d	2	3	67	50	63	67	0	2	5	None			
	MA5d	2	3	67	48	63	67	0	2	5	None			
	MA11d	2	3	67	43	63	67	0	2	5	None			
	MA10d	2	3	67	44	63	67	0	2	5	None			
	MA9d	2	3	67	44	63	67	0	2	5	None			





Table C-1. Operational Noise Levels – Build Alternative (2026)													
					Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thresh		Cumulative Increase (dBA L _{dn} or L _{eq})	Increase in Cum Level Thre		FTA Level of Noise Impact		
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative		
	MA8d	2	3	67	45	63	67	0	2	5	None		
	MA7d	2	3	67	45	63	67	0	2	5	None		
	MA6d	2	3	67	46	63	67	0	2	5	None		
	MA16a	2	2	67	45	63	67	0	2	5	None		
	MA17a	2	2	67	44	63	67	0	2	5	None		
	MA18a	2	2	67	44	63	67	0	2	5	None		
	MA19a	2	2	67	43	63	67	0	2	5	None		
	MA20a	2	2	67	41	63	67	0	2	5	None		
	MA21a	2	2	67	41	63	67	0	2	5	None		
	MA22a	2	2	67	41	63	67	0	2	5	None		
	MA23a	2	2	67	41	63	67	0	2	5	None		
Mozaic Apartments West	MA24a	2	2	67	41	63	67	0	2	5	None		
Building	MA25a	2	2	67	44	63	67	0	2	5	None		
	MA26a	2	2	67	41	63	67	0	2	5	None		
	MA16b	2	2	67	46	63	67	0	2	5	None		
	MA17b	2	2	67	45	63	67	0	2	5	None		
	MA18b	2	2	67	44	63	67	0	2	5	None		
	MA19b	2	2	67	44	63	67	0	2	5	None		
	MA20b	2	2	67	41	63	67	0	2	5	None		
	MA21b	2	2	67	41	63	67	0	2	5	None		
	MA22b	2	2	67	41	63	67	0	2	5	None		





Table C-1. Operational	Table C-1. Operational Noise Levels – Build Alternative (2026)													
					Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thresh	Impact olds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increase in Cum Level Thre	ulative Noise sholds	FTA Level of Noise Impact			
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative			
	MA23b	2	2	67	41	63	67	0	2	5	None			
	MA24b	2	2	67	41	63	67	0	2	5	None			
	MA25b	2	2	67	44	63	67	0	2	5	None			
	MA26b	2	2	67	41	63	67	0	2	5	None			
	MA16c	2	2	67	46	63	67	0	2	5	None			
	MA17c	2	2	67	45	63	67	0	2	5	None			
	MA18c	2	2	67	45	63	67	0	2	5	None			
	MA19c	2	2	67	44	63	67	0	2	5	None			
	MA20c	2	2	67	41	63	67	0	2	5	None			
	MA21c	2	2	67	41	63	67	0	2	5	None			
	MA22c	2	2	67	41	63	67	0	2	5	None			
	MA23c	2	2	67	41	63	67	0	2	5	None			
	MA24c	2	2	67	41	63	67	0	2	5	None			
	MA25c	2	2	67	45	63	67	0	2	5	None			
	MA26c	2	2	67	41	63	67	0	2	5	None			
	MA16d	2	2	67	47	63	67	0	2	5	None			
	MA17d	2	2	67	46	63	67	0	2	5	None			
	MA18d	2	2	67	45	63	67	0	2	5	None			
	MA19d	2	2	67	45	63	67	0	2	5	None			
	MA20d	2	2	67	41	63	67	0	2	5	None			
	MA21d	2	2	67	41	63	67	0	2	5	None			





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					Project Noise Exposure	Absolute	Impact	Cumulative Increase	Increase in Cum	ulative <u>Noise</u>	FTA Level of
					(dBA L _{dn} or L _{eq})	Thresh	olds	(dBA L _{dn} or L _{eq})	Level Thre		Noise Impact
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative
	MA22d	2	2	67	41	63	67	0	2	5	None
	MA23d	2	2	67	41	63	67	0	2	5	None
	MA24d	2	2	67	41	63	67	0	2	5	None
	MA25d	2	2	67	47	63	67	0	2	5	None
	MA26d	2	2	67	41	63	67	0	2	5	None
La Petite Academy (First 5)	First5	3	1	64	47	66	70	0	4	7	None
	SF1	2	13	71	40	66	70	0	3	7	None
	SF2	2	13	71	50	66	70	0	3	7	None
	SF3	2	13	71	41	66	70	0	3	7	None
	SF4	2	13	71	50	66	70	0	3	7	None
	SF5	2	13	71	42	66	70	0	3	7	None
	SF6	2	13	71	52	66	70	0	3	7	None
	SF7	2	13	71	42	66	70	0	3	7	None
One Santa Fe Apartments	SF8	2	13	71	54	66	70	0	3	7	None
	SF9	2	13	71	43	66	70	0	3	7	None
	SF10	2	13	71	55	66	70	0	3	7	None
	SF11	2	13	71	44	66	70	0	3	7	None
	SF12	2	13	71	57	66	70	0	3	7	None
	SF13	2	13	71	44	66	70	0	3	7	None
	SF14	2	13	71	44	66	70	0	3	7	None
	SF15	2	13	71	43	66	70	0	3	7	None





Table C-1. Operational N	Noise Levels	s – Build Alter	native (2026)								
					Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thresh		Cumulative Increase (dBA L _{dn} or L _{eq})	Increase in Cum Level Thre		FTA Level of Noise Impact
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA)	Build Alternative	Moderate	Severe	Build Alternative	Moderate	Severe	Build Alternative
	SF16	2	13	71	43	66	70	0	3	7	None
	SF17	2	13	71	42	66	70	0	3	7	None
	SF18	2	13	71	42	66	70	0	3	7	None
	SF19	2	13	71	42	66	70	0	3	7	None
	SF20	2	13	71	42	66	70	0	3	7	None
	SF21	2	13	71	43	66	70	0	3	7	None
	SF22	2	13	71	43	66	70	0	3	7	None
	SF23	2	13	71	44	66	70	0	3	7	None
	SF24	2	13	71	56	66	70	0	3	7	None
	SF25	2	13	71	44	66	70	0	3	7	None
	SF26	2	13	71	56	66	70	0	3	7	None
	SF27	2	13	71	45	66	70	0	3	7	None
	SF28	2	13	71	56	66	70	0	3	7	None
	SF29	2	13	71	45	66	70	0	3	7	None
	SF30	2	13	71	56	66	70	0	3	7	None
	SF31	2	13	71	45	66	70	0	3	7	None
	SF32	2	13	71	45	66	70	0	3	7	None
	SF33	2	13	71	45	66	70	0	3	7	None
	SF34	2	13	71	45	66	70	0	3	7	None
Metro Gateway Childhood Development Center	GCC	3	1	64	46	66	70	0	3	7	None

dBA=A-weighted decibel; FTA=Federal Transit Administration; ID=identification; L_{dn}=day-night average sound level; L_{eq}=equivalent noise level; Metro=Los Angeles County Metropolitan Transportation Authority





Table C-2. Build Altern		• 		Existing Noise	Project Noise						
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Exposure (dBA L _{dn} or L _{eq})	Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increase in Noise Level	Cumulative Thresholds	FTA Level of Noise Impact
	WM1	3	1	66	62	67	72	1	2	5	None
	WM2	2	40	69	62	64	69	1	2	5	None
	WM3	2	40	69	60	64	69	1	2	5	None
	WM4	2	12	69	55	64	69	0	2	5	None
	WM5	2	11	69	58	64	69	0	2	5	None
	WM6	2	16	69	68	64	69	3	2	5	Moderate
	WM7	2	38	69	59	64	69	0	2	5	None
William Mead Homes	WM8	2	24	69	75	64	69	7	2	5	Severe
William Mead Homes	WM9	2	46	69	58	64	69	0	2	5	None
	WM10	2	20	69	59	64	69	0	2	5	None
	WM11	2	40	69	57	64	69	0	2	2 5	None
	WM12	2	40	69	56	64	69	0	2	5	None
	WM13	2	32	69	56	64	69	0	2	5	None
	WM14	2	40	69	60	64	69	0	2	5	None
	WM15	2	16	69	59	64	69	0	2	5	None
	PK1	3	1	66	71	67	72	6	2	5	Severe
	HFC1	2	5	73	71	65	70	2	2	5	Severe
	HFC2	2	5	73	72	65	70	2	2	5	Severe
	HFC3	2	5	73	65	65	70	1	2	5	Moderate
Care First Village	HFC4	2	5	73	65	65	70	1	2	5	Moderate
	HFC5	2	5	73	58	65	70	0	2	5	None
	HFC6	2	5	73	57	65	70	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	HFC7	2	5	73	57	65	70	0	2	5	None
	HFC8	2	5	73	55	65	70	0	2	5	None
	HFC9	2	5	73	54	65	70	0	2	5	None
	HFC10	2	5	73	54	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC17	0	0	73	64	65	70	1	2	5	None
	HFC18	2	5	73	62	65	70	0	2	5	None
	HFC19	2	5	73	65	65	70	1	2	5	Moderate
	HFC20	2	5	73	60	65	70	0	2	5	None
	HFC21	2	5	73	60	65	70	0	2	5	None
	HFC22	2	5	73	53	65	70	0	2	5	None
	HFC23	2	5	73	53	65	70	0	2	5	None
	HFC24	2	5	73	53	65	70	0	2	5	None
	HFC25	2	5	73	52	65	70	0	2	5	None
	HFC26	2	5	73	52	65	70	0	2	5	None
	HFC27	2	5	73	52	65	70	0	2	5	None
	HFC28	3	1	71	65	75	80	1	3	5	None





Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
Metro Senior Housing	MT1	2	123	60	55	58	63	1	2	5	None
Los Angeles Central Jail	CJ1	2	4000	73	59	66	71	0	2	5	None
Twin Towers Correctional Facility	TT1	2	9500	73	55	66	71	0	2	5	None
	MA12a	2	3	67	61	63	67	1	2	5	None
	MA13a	2	3	67	58	63	67	1	2	5	None
	MA14a	2	3	67	56	63	67	0	2	5	None
	MA15a	2	3	67	54	63	67	0	2	5	None
	MA1a	2	3	67	57	63	67	0	2	5	None
	MA2a	2	3	67	56	63	67	0	2	5	None
	MA3a	2	3	67	54	63	67	0	2	5	None
	MA4a	2	3	67	53	63	67	0	2	5	None
	MA5a	2	3	67	52	63	67	0	2	5	None
Mozaic Apartments East Building	MA11a	2	3	67	49	63	67	0	2	5	None
	MA10a	2	3	67	49	63	67	0	2	5	None
	MA9a	2	3	67	50	63	67	0	2	5	None
	MA8a	2	3	67	50	63	67	0	2	5	None
	MA7a	2	3	67	51	63	67	0	2	5	None
	MA6a	2	3	67	51	63	67	0	2	5	None
	MA12b	2	3	67	62	63	67	1	2	5	None
	MA13b	2	3	67	59	63	67	1	2	5	None
	MA14b	2	3	67	57	63	67	0	2	5	None
	MA15b	2	3	67	55	63	67	0	2	5	None





loise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA1b	2	3	67	60	63	67	1	2	5	None
	MA2b	2	3	67	57	63	67	0	2	5	None
	MA3b	2	3	67	55	63	67	0	2	5	None
	MA4b	2	3	67	54	63	67	0	2	5	None
	MA5b	2	3	67	52	63	67	0	2	5	None
	MA11b	2	3	67	49	63	67	0	2	5	None
	MA10b	2	3	67	49	63	67	0	2	5	None
	MA9b	2	3	67	50	63	67	0	2	5	None
	MA8b	2	3	67	50	63	67	0	2	5	None
	MA7b	2	3	67	51	63	67	0	2	5	None
	MA6b	2	3	67	51	63	67	0	2	5	None
	MA12c	2	3	67	62	63	67	1	2	5	None
	MA13c	2	3	67	60	63	67	1	2	5	None
	MA14c	2	3	67	58	63	67	1	2	5	None
	MA15c	2	3	67	57	63	67	0	2	5	None
	MA1c	2	3	67	61	63	67	1	2	5	None
	MA2c	2	3	67	58	63	67	1	2	5	None
	MA3c	2	3	67	56	63	67	0	2	5	None
	MA4c	2	3	67	54	63	67	0	2	5	None
	MA5c	2	3	67	53	63	67	0	2	5	None
	MA11c	2	3	67	49	63	67	0	2	5	None
	MA10c	2	3	67	49	63	67	0	2	5	None





ise-Sensitive Area scription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA9c	2	3	67	50	63	67	0	2	5	None
	MA8c	2	3	67	50	63	67	0	2	5	None
	MA7c	2	3	67	51	63	67	0	2	5	None
	MA6c	2	3	67	51	63	67	0	2	5	None
	MA12d	2	3	67	63	63	67	1	2	5	Moderate
	MA13d	2	3	67	60	63	67	1	2	5	None
	MA14d	2	3	67	59	63	67	1	2	5	None
	MA15d	2	3	67	58	63	67	0	2	5	None
	MA1d	2	3	67	62	63	67	1	2	5	None
	MA2d	2	3	67	59	63	67	1	2	5	None
	MA3d	2	3	67	57	63	67	0	2	5	None
	MA4d	2	3	67	55	63	67	0	2	5	None
	MA5d	2	3	67	54	63	67	0	2	5	None
	MA11d	2	3	67	49	63	67	0	2	5	None
	MA10d	2	3	67	49	63	67	0	2	5	None
	MA9d	2	3	67	50	63	67	0	2	5	None
	MA8d	2	3	67	50	63	67	0	2	5	None
	MA7d	2	3	67	51	63	67	0	2	5	None
	MA6d	2	3	67	51	63	67	0	2	5	None
	MA16a	2	2	67	50	63	67	0	2	5	None
ozaic Apartments West uilding	MA17a	2	2	67	50	63	67	0	2	5	None
	MA18a	2	2	67	49	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA19a	2	2	67	49	63	67	0	2	5	None
	MA20a	2	2	67	47	63	67	0	2	5	None
	MA21a	2	2	67	47	63	67	0	2	5	None
	MA22a	2	2	67	47	63	67	0	2	5	None
	MA23a	2	2	67	47	63	67	0	2	5	None
	MA24a	2	2	67	47	63	67	0	2	5	None
	MA25a	2	2	67	49	63	67	0	2	5	None
	MA26a	2	2	67	47	63	67	0	2	5	None
	MA16b	2	2	67	51	63	67	0	2	5	None
	MA17b	2	2	67	50	63	67	0	2	5	None
	MA18b	2	2	67	50	63	67	0	2	5	None
	MA19b	2	2	67	49	63	67	0	2	5	None
	MA20b	2	2	67	47	63	67	0	2	5	None
	MA21b	2	2	67	47	63	67	0	2	5	None
	MA22b	2	2	67	47	63	67	0	2	5	None
	MA23b	2	2	67	47	63	67	0	2	5	None
	MA24b	2	2	67	47	63	67	0	2	5	None
	MA25b	2	2	67	50	63	67	0	2	5	None
	MA26b	2	2	67	47	63	67	0	2	5	None
	MA16c	2	2	67	51	63	67	0	2	5	None
	MA17c	2	2	67	50	63	67	0	2	5	None
	MA18c	2	2	67	50	63	67	0	2	5	None





Table C-2. Build Alterna				Evicting Noise	Project Noise						
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA19c	2	2	67	50	63	67	0	2	5	None
	MA20c	2	2	67	47	63	67	0	2	5	None
	MA21c	2	2	67	47	63	67	0	2	5	None
	MA22c	2	2	67	47	63	67	0	2	5	None
	MA23c	2	2	67	47	63	67	0	2	5	None
	MA24c	2	2	67	47	63	67	0	2	5	None
	MA25c	2	2	67	51	63	67	0	2	5	None
	MA26c	2	2	67	47	63	67	0	2	5	None
	MA16d	2	2	67	52	63	67	0	2	5	None
	MA17d	2	2	67	51	63	67	0	2	5	None
	MA18d	2	2	67	51	63	67	0	2	5	None
	MA19d	2	2	67	50	63	67	0	2	5	None
	MA20d	2	2	67	47	63	67	0	2	5	None
	MA21d	2	2	67	47	63	67	0	2	5	None
	MA22d	2	2	67	47	63	67	0	2	5	None
	MA23d	2	2	67	47	63	67	0	2	5	None
	MA24d	2	2	67	47	63	67	0	2	5	None
	MA25d	2	2	67	52	63	67	0	2	5	None
	MA26d	2	2	67	47	63	67	0	2	5	None
La Petite Academy (First 5)	First5	3	1	64	50	66	70	0	4	7	None
One Santa Fe Apartments	SF1	2	13	71	44	66	70	0	3	7	None
	SF2	2	13	71	52	66	70	0	3	7	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	SF3	2	13	71	45	66	70	0	3	7	None
	SF4	2	13	71	52	66	70	0	3	7	None
	SF5	2	13	71	46	66	70	0	3	7	None
	SF6	2	13	71	54	66	70	0	3	7	None
	SF7	2	13	71	45	66	70	0	3	7	None
	SF8	2	13	71	56	66	70	0	3	7	None
	SF9	2	13	71	46	66	70	0	3	7	None
	SF10	2	13	71	57	66	70	0	3	7	None
	SF11	2	13	71	47	66	70	0	3	7	None
	SF12	2	13	71	59	66	70	0	3	7	None
	SF13	2	13	71	47	66	70	0	3	7	None
	SF14	2	13	71	46	66	70	0	3	7	None
	SF15	2	13	71	46	66	70	0	3	7	None
	SF16	2	13	71	46	66	70	0	3	7	None
	SF17	2	13	71	46	66	70	0	3	7	None
	SF18	2	13	71	46	66	70	0	3	7	None
	SF19	2	13	71	45	66	70	0	3	7	None
	SF20	2	13	71	45	66	70	0	3	7	None
	SF21	2	13	71	46	66	70	0	3	7	None
	SF22	2	13	71	46	66	70	0	3	7	None
	SF23	2	13	71	46	66	70	0	3	7	None
	SF24	2	13	71	58	66	70	0	3	7	None





Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	SF25	2	13	71	47	66	70	0	3	7	None
	SF26	2	13	71	58	66	70	0	3	7	None
	SF27	2	13	71	47	66	70	0	3	7	None
	SF28	2	13	71	59	66	70	0	3	7	None
	SF29	2	13	71	47	66	70	0	3	7	None
	SF30	2	13	71	59	66	70	0	3	7	None
	SF31	2	13	71	47	66	70	0	3	7	None
	SF32	2	13	71	47	66	70	0	3	7	None
	SF33	2	13	71	47	66	70	0	3	7	None
	SF34	2	13	71	48	66	70	0	3	7	None
Metro Gateway Childhood Development Center	GCC	3	1	64	51	66	70	0	3	7	None

dBA=A-weighted decibel; FTA=Federal Transit Administration; ID=identification; L_{dn}=day-night average sound level; L_{eq}=equivalent noise level; Metro=Los Angeles County Metropolitan Transportation Authority





Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	WM1	3	1	66	55	67	72	0	2	5	None
	WM2	2	40	69	58	64	69	0	2	5	None
	WM3	2	40	69	54	64	69	0	2	5	None
	WM4	2	12	69	52	64	69	0	2	5	None
	WM5	2	11	69	57	64	69	0	2	5	None
	WM6	2	16	69	67	64	69	2	2	5	Moderate
	WM7	2	38	69	58	64	69	0	2	5	None
William Mead Homes	WM8	2	24	69	75	64	69	7	2	5	Severe
William Wead Homes	WM9	2	46	69	57	64	69	0	2	5	None
	WM10 WM11	2	20	69	58	64	69	0	2	5	None
	WM11	2	40	69	53	64	69	0	2	5	None
	WM12	2	40	69	51	64	69	0	2	5	None
	WM13	2	32	69	52	64	69	0	2	5	None
	WM14	2	40	69	59	64	69	0	2	5	None
	WM15	2	16	69	53	64	69	0	2	5	None
	PK1	3	1	66	71	67	72	6	2	5	Severe
	HFC1	2	5	73	71	65	70	2	2	5	Severe
	HFC2	2	5	73	72	65	70	2	2	5	Severe
Care First Village	HFC3	2	5	73	64	65	70	0	2	5	None
	HFC4	2	5	73	64	65	70	0	2	5	None
	HFC5	2	5	73	58	65	70	0	2	5	None
	HFC6	2	5	73	57	65	70	0	2	5	None





loise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	HFC7	2	5	73	57	65	70	0	2	5	None
	HFC8	2	5	73	56	65	70	0	2	5	None
	HFC9	2	5	73	54	65	70	0	2	5	None
	HFC10	2	5	73	53	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC17	0	0	73	64	65	70	1	2	5	None
	HFC18	2	5	73	61	65	70	0	2	5	None
	HFC19	2	5	73	63	65	70	0	2	5	None
	HFC20	2	5	73	60	65	70	0	2	5	None
	HFC21	2	5	73	59	65	70	0	2	5	None
	HFC22	2	5	73	53	65	70	0	2	5	None
	HFC23	2	5	73	53	65	70	0	2	5	None
	HFC24	2	5	73	52	65	70	0	2	5	None
	HFC25	2	5	73	52	65	70	0	2	5	None
	HFC26	2	5	73	51	65	70	0	2	5	None
	HFC27	2	5	73	52	65	70	0	2	5	None
	HFC28	3	1	71	65	75	80	1	3	5	None





Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
Metro Senior Housing	MT1	2	123	60	51	58	63	0	2	5	None
Los Angeles Central Jail	CJ1	2	4000	73	59	66	71	0	2	5	None
Twin Towers Correctional Facility	TT1	2	9500	73	55	66	71	0	2	5	None
	MA12a	2	3	67	62	63	67	1	2	5	None
	MA13a	2	3	67	59	63	67	1	2	5	None
	MA14a	2	3	67	58	63	67	0	2	5	None
	MA15a	2	3	67	56	63	67	0	2	5	None
	MA1a	2	3	67	58	63	67	0	2	5	None
	MA2a	2	3	67	57	63	67	0	2	5	None
	MA3a	2	3	67	55	63	67	0	2	5	None
	MA4a	2	3	67	54	63	67	0	2	5	None
	MA5a	2	3	67	52	63	67	0	2	5	None
Mozaic Apartments East Building	MA11a	2	3	67	49	63	67	0	2	5	None
	MA10a	2	3	67	50	63	67	0	2	5	None
	MA9a	2	3	67	50	63	67	0	2	5	None
	MA8a	2	3	67	51	63	67	0	2	5	None
	MA7a	2	3	67	51	63	67	0	2	5	None
	MA6a	2	3	67	52	63	67	0	2	5	None
	MA12b	2	3	67	63	63	67	1	2	5	Moderate
	MA13b	2	3	67	60	63	67	1	2	5	None
	MA14b	2	3	67	59	63	67	1	2	5	None
	MA15b	2	3	67	57	63	67	0	2	5	None





loise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA1b	2	3	67	60	63	67	1	2	5	None
	MA2b	2	3	67	58	63	67	1	2	5	None
	MA3b	2	3	67	56	63	67	0	2	5	None
	MA4b	2	3	67	54	63	67	0	2	5	None
	MA5b	2	3	67	53	63	67	0	2	5	None
	MA11b	2	3	67	49	63	67	0	2	5	None
	MA10b	2	3	67	50	63	67	0	2	5	None
	MA9b	2	3	67	50	63	67	0	2	5	None
	MA8b	2	3	67	51	63	67	0	2	5	None
	MA7b	2	3	67	51	63	67	0	2	5	None
	MA6b	2	3	67	52	63	67	0	2	5	None
	MA12c	2	3	67	63	63	67	2	2	5	Moderate
	MA13c	2	3	67	61	63	67	1	2	5	None
	MA14c	2	3	67	60	63	67	1	2	5	None
	MA15c	2	3	67	58	63	67	0	2	5	None
	MA1c	2	3	67	61	63	67	1	2	5	None
	MA2c	2	3	67	59	63	67	1	2	5	None
	MA3c	2	3	67	57	63	67	0	2	5	None
	MA4c	2	3	67	55	63	67	0	2	5	None
	MA5c	2	3	67	53	63	67	0	2	5	None
	MA11c	2	3	67	49	63	67	0	2	5	None
	MA10c	2	3	67	50	63	67	0	2	5	None





ise-Sensitive Area scription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA9c	2	3	67	50	63	67	0	2	5	None
	MA8c	2	3	67	51	63	67	0	2	5	None
	MA7c	2	3	67	51	63	67	0	2	5	None
	MA6c	2	3	67	52	63	67	0	2	5	None
	MA12d	2	3	67	64	63	67	2	2	5	Moderate
	MA13d	2	3	67	62	63	67	1	2	5	None
	MA14d	2	3	67	60	63	67	1	2	5	None
	MA15d	2	3	67	59	63	67	1	2	5	None
	MA1d	2	3	67	62	63	67	1	2	5	None
	MA2d	2	3	67	60	63	67	1	2	5	None
	MA3d	2	3	67	57	63	67	0	2	5	None
	MA4d	2	3	67	56	63	67	0	2	5	None
	MA5d	2	3	67	54	63	67	0	2	5	None
	MA11d	2	3	67	49	63	67	0	2	5	None
	MA10d	2	3	67	50	63	67	0	2	5	None
	MA9d	2	3	67	50	63	67	0	2	5	None
	MA8d	2	3	67	51	63	67	0	2	5	None
	MA7d	2	3	67	51	63	67	0	2	5	None
	MA6d	2	3	67	52	63	67	0	2	5	None
	MA16a	2	2	67	50	63	67	0	2	5	None
ozaic Apartments West uilding	MA17a	2	2	67	50	63	67	0	2	5	None
	MA18a	2	2	67	49	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA19a	2	2	67	49	63	67	0	2	5	None
	MA20a	2	2	67	46	63	67	0	2	5	None
	MA21a	2	2	67	46	63	67	0	2	5	None
	MA22a	2	2	67	46	63	67	0	2	5	None
	MA23a	2	2	67	46	63	67	0	2	5	None
	MA24a	2	2	67	47	63	67	0	2	5	None
	MA25a	2	2	67	50	63	67	0	2	5	None
	MA26a	2	2	67	47	63	67	0	2	5	None
	MA16b	2	2	67	51	63	67	0	2	5	None
	MA17b	2	2	67	50	63	67	0	2	5	None
	MA18b	2	2	67	50	63	67	0	2	5	None
	MA19b	2	2	67	49	63	67	0	2	5	None
	MA20b	2	2	67	46	63	67	0	2	5	None
	MA21b	2	2	67	46	63	67	0	2	5	None
	MA22b	2	2	67	46	63	67	0	2	5	None
	MA23b	2	2	67	46	63	67	0	2	5	None
	MA24b	2	2	67	47	63	67	0	2	5	None
	MA25b	2	2	67	50	63	67	0	2	5	None
	MA26b	2	2	67	47	63	67	0	2	5	None
	MA16c	2	2	67	52	63	67	0	2	5	None
	MA17c	2	2	67	51	63	67	0	2	5	None
	MA18c	2	2	67	50	63	67	0	2	5	None





Table C-3. Build Alterna	ative – 2040 O										
Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	MA19c	2	2	67	50	63	67	0	2	5	None
	MA20c	2	2	67	46	63	67	0	2	5	None
	MA21c	2	2	67	46	63	67	0	2	5	None
	MA22c	2	2	67	46	63	67	0	2	5	None
	MA23c	2	2	67	46	63	67	0	2	5	None
	MA24c	2	2	67	47	63	67	0	2	5	None
	MA25c	2	2	67	51	63	67	0	2	5	None
	MA26c	2	2	67	47	63	67	0	2	5	None
	MA16d	2	2	67	52	63	67	0	2	5	None
	MA17d	2	2	67	51	63	67	0	2	5	None
	MA18d	2	2	67	51	63	67	0	2	5	None
	MA19d	2	2	67	50	63	67	0	2	5	None
	MA20d	2	2	67	46	63	67	0	2	5	None
	MA21d	2	2	67	46	63	67	0	2	5	None
	MA22d	2	2	67	46	63	67	0	2	5	None
	MA23d	2	2	67	46	63	67	0	2	5	None
	MA24d	2	2	67	47	63	67	0	2	5	None
	MA25d	2	2	67	53	63	67	0	2	5	None
	MA26d	2	2	67	47	63	67	0	2	5	None
La Petite Academy (First 5)	First5	3	1	64	50	66	70	0	4	7	None
One Santa Fe Apartments	SF1	2	13	71	43	66	70	0	3	7	None
one danta i e Apartments	SF2	2	13	71	53	66	70	0	3	7	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	SF3	2	13	71	44	66	70	0	3	7	None
	SF4	2	13	71	53	66	70	0	3	7	None
	SF5	2	13	71	45	66	70	0	3	7	None
	SF6	2	13	71	55	66	70	0	3	7	None
	SF7	2	13	71	45	66	70	0	3	7	None
	SF8	2	13	71	56	66	70	0	3	7	None
	SF9	2	13	71	46	66	70	0	3	7	None
	SF10	2	13	71	58	66	70	0	3	7	None
	SF11	2	13	71	47	66	70	0	3	7	None
	SF12	2	13	71	59	66	70	0	3	7	None
	SF13	2	13	71	47	66	70	0	3	7	None
	SF14	2	13	71	46	66	70	0	3	7	None
	SF15	2	13	71	46	66	70	0	3	7	None
	SF16	2	13	71	46	66	70	0	3	7	None
	SF17	2	13	71	45	66	70	0	3	7	None
	SF18	2	13	71	45	66	70	0	3	7	None
	SF19	2	13	71	45	66	70	0	3	7	None
	SF20	2	13	71	45	66	70	0	3	7	None
	SF21	2	13	71	46	66	70	0	3	7	None
	SF22	2	13	71	46	66	70	0	3	7	None
	SF23	2	13	71	46	66	70	0	3	7	None
	SF24	2	13	71	59	66	70	0	3	7	None





Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})		Cumulative Thresholds	FTA Level of Noise Impact
	SF25	2	13	71	47	66	70	0	3	7	None
	SF26	2	13	71	59	66	70	0	3	7	None
	SF27	2	13	71	47	66	70	0	3	7	None
	SF28	2	13	71	59	66	70	0	3	7	None
	SF29	2	13	71	48	66	70	0	3	7	None
	SF30	2	13	71	59	66	70	0	3	7	None
	SF31	2	13	71	48	66	70	0	3	7	None
	SF32	2	13	71	48	66	70	0	3	7	None
	SF33	2	13	71	48	66	70	0	3	7	None
	SF34	2	13	71	48	66	70	0	3	7	None
Metro Gateway Childhood Development Center	GCC	3	1	64	52	66	70	0	3	7	None

dBA=A-weighted decibel; FTA=Federal Transit Administration; ID=identification; L_{dn}=day-night average sound level; L_{eq}=equivalent noise level; Metro=Los Angeles County Metropolitan Transportation Authority





loise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impac
	WM1	3	1	66	62	67	72	1	2	5	None
	WM2	2	40	69	61	64	69	1	2	5	None
	WM3	2	40	69	60	64	69	0	2	5	None
	WM4	2	12	69	55	64	69	0	2	5	None
	WM5	2	11	69	57	64	69	0	2	5	None
	WM6	2	16	69	63	64	69	1	2	5	None
	WM7	2	38	69	58	64	69	0	2	5	None
illiam Mead Homes	WM8	2	24	69	63	64	69	1	2	5	None
illiant weat nomes	WM9	2	46	69	57	64	69	0	2	5	None
	WM10	2	20	69	58	64	69	0	2	5	None
	WM11	2	40	69	56	64	69	0	2	5	None
	WM12	2	40	69	56	64	69	0	2	5	None
	WM13	2	32	69	56	64	69	0	2	5	None
	WM14	2	40	69	59	64	69	0	2	5	None
	WM15	2	16	69	59	64	69	0	2	5	None
	PK1	3	1	66	64	67	72	2	2	5	None
	HFC1	2	5	73	64	65	70	0	2	5	None
	HFC2	2	5	73	62	65	70	0	2	5	None
	HFC3	2	5	73	65	65	70	1	2	5	Moderate
	HFC4	2	5	73	64	65	70	1	2	5	None
are First Village	HFC5	2	5	73	58	65	70	0	2	5	None
	HFC6	2	5	73	57	65	70	0	2	5	None
	HFC7	2	5	73	55	65	70	0	2	5	None
	HFC8	2	5	73	55	65	70	0	2	5	None
	HFC9	2	5	73	54	65	70	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impact
	HFC10	2	5	73	54	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC17	0	0	73	62	65	70	0	2	5	None
	HFC18	2	5	73	61	65	70	0	2	5	None
	HFC19	2	5	73	64	65	70	1	2	5	None
	HFC20	2	5	73	60	65	70	0	2	5	None
	HFC21	2	5	73	59	65	70	0	2	5	None
	HFC22	2	5	73	53	65	70	0	2	5	None
	HFC23	2	5	73	53	65	70	0	2	5	None
	HFC24	2	5	73	53	65	70	0	2	5	None
	HFC25	2	5	73	52	65	70	0	2	5	None
	HFC26	2	5	73	52	65	70	0	2	5	None
	HFC27	2	5	73	52	65	70	0	2	5	None
	HFC28	3	1	71	61	75	80	0	3	5	None
etro Senior Housing	MT1	2	123	60	55	58	63	1	2	5	None
os Angeles Central Jail	CJ1	2	4000	73	59	66	71	0	2	5	None
vin Towers Correctional acility	TT1	2	9500	73	55	66	71	0	2	5	None
	MA12a	2	3	67	61	63	67	1	2	5	None
ozaic Apartments East ilding	MA13a	2	3	67	58	63	67	1	2	5	None
	MA14a	2	3	67	56	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Three	e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impact
	MA15a	2	3	67	54	63	67	0	2	5	None
	MA1a	2	3	67	57	63	67	0	2	5	None
	MA2a	2	3	67	56	63	67	0	2	5	None
	MA3a	2	3	67	54	63	67	0	2	5	None
	MA4a	2	3	67	53	63	67	0	2	5	None
	MA5a	2	3	67	52	63	67	0	2	5	None
	MA11a	2	3	67	49	63	67	0	2	5	None
	MA10a	2	3	67	49	63	67	0	2	5	None
	MA9a	2	3	67	50	63	67	0	2	5	None
	MA8a	2	3	67	50	63	67	0	2	5	None
	MA7a	2	3	67	51	63	67	0	2	5	None
	MA6a	2	3	67	51	63	67	0	2	5	None
	MA12b	2	3	67	62	63	67	1	2	5	None
	MA13b	2	3	67	59	63	67	1	2	5	None
	MA14b	2	3	67	57	63	67	0	2	5	None
	MA15b	2	3	67	55	63	67	0	2	5	None
	MA1b	2	3	67	60	63	67	1	2	5	None
	MA2b	2	3	67	57	63	67	0	2	5	None
	MA3b	2	3	67	55	63	67	0	2	5	None
	MA4b	2	3	67	54	63	67	0	2	5	None
	MA5b	2	3	67	52	63	67	0	2	5	None
	MA11b	2	3	67	49	63	67	0	2	5	None
	MA10b	2	3	67	49	63	67	0	2	5	None
	MA9b	2	3	67	50	63	67	0	2	5	None
	MA8b	2	3	67	50	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impact
	MA7b	2	3	67	51	63	67	0	2	5	None
	MA6b	2	3	67	51	63	67	0	2	5	None
	MA12c	2	3	67	62	63	67	1	2	5	None
	MA13c	2	3	67	60	63	67	1	2	5	None
	MA14c	2	3	67	58	63	67	1	2	5	None
	MA15c	2	3	67	57	63	67	0	2	5	None
	MA1c	2	3	67	61	63	67	1	2	5	None
	MA2c	2	3	67	58	63	67	1	2	5	None
	MA3c	2	3	67	56	63	67	0	2	5	None
	MA4c	2	3	67	54	63	67	0	2	5	None
	MA5c	2	3	67	53	63	67	0	2	5	None
	MA11c	2	3	67	49	63	67	0	2	5	None
	MA10c	2	3	67	49	63	67	0	2	5	None
	MA9c	2	3	67	50	63	67	0	2	5	None
	MA8c	2	3	67	50	63	67	0	2	5	None
	MA7c	2	3	67	51	63	67	0	2	5	None
	MA6c	2	3	67	51	63	67	0	2	5	None
	MA12d	2	3	67	63	63	67	1	2	5	Moderate
	MA13d	2	3	67	60	63	67	1	2	5	None
	MA14d	2	3	67	59	63	67	1	2	5	None
	MA15d	2	3	67	58	63	67	0	2	5	None
	MA1d	2	3	67	61	63	67	1	2	5	None
	MA2d	2	3	67	59	63	67	1	2	5	None
	MA3d	2	3	67	57	63	67	0	2	5	None
	MA4d	2	3	67	55	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulativ Level Thr	ve Noise	FTA Level of Noise Impac
	MA5d	2	3	67	54	63	67	0	2	5	None
	MA11d	2	3	67	49	63	67	0	2	5	None
	MA10d	2	3	67	49	63	67	0	2	5	None
	MA9d	2	3	67	50	63	67	0	2	5	None
	MA8d	2	3	67	50	63	67	0	2	5	None
	MA7d	2	3	67	51	63	67	0	2	5	None
	MA6d	2	3	67	51	63	67	0	2	5	None
	MA16a	2	2	67	50	63	67	0	2	5	None
	MA17a	2	2	67	50	63	67	0	2	5	None
	MA18a	2	2	67	49	63	67	0	2	5	None
	MA19a	2	2	67	49	63	67	0	2	5	None
	MA20a	2	2	67	47	63	67	0	2	5	None
	MA21a	2	2	67	47	63	67	0	2	5	None
	MA22a	2	2	67	47	63	67	0	2	5	None
	MA23a	2	2	67	47	63	67	0	2	5	None
zaic Apartments West	MA24a	2	2	67	47	63	67	0	2	5	None
ilding	MA25a	2	2	67	49	63	67	0	2	5	None
	MA26a	2	2	67	47	63	67	0	2	5	None
	MA16b	2	2	67	51	63	67	0	2	5	None
	MA17b	2	2	67	50	63	67	0	2	5	None
	MA18b	2	2	67	50	63	67	0	2	5	None
	MA19b	2	2	67	49	63	67	0	2	5	None
	MA20b	2	2	67	47	63	67	0	2	5	None
	MA21b	2	2	67	47	63	67	0	2	5	None
	MA22b	2	2	67	47	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Three	e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impact
	MA23b	2	2	67	47	63	67	0	2	5	None
	MA24b	2	2	67	47	63	67	0	2	5	None
	MA25b	2	2	67	50	63	67	0	2	5	None
	MA26b	2	2	67	47	63	67	0	2	5	None
	MA16c	2	2	67	51	63	67	0	2	5	None
	MA17c	2	2	67	50	63	67	0	2	5	None
	MA18c	2	2	67	50	63	67	0	2	5	None
	MA19c	2	2	67	50	63	67	0	2	5	None
	MA20c	2	2	67	47	63	67	0	2	5	None
	MA21c	2	2	67	47	63	67	0	2	5	None
	MA22c	2	2	67	47	63	67	0	2	5	None
	MA23c	2	2	67	47	63	67	0	2	5	None
	MA24c	2	2	67	47	63	67	0	2	5	None
	MA25c	2	2	67	51	63	67	0	2	5	None
	MA26c	2	2	67	47	63	67	0	2	5	None
	MA16d	2	2	67	52	63	67	0	2	5	None
	MA17d	2	2	67	51	63	67	0	2	5	None
	MA18d	2	2	67	51	63	67	0	2	5	None
	MA19d	2	2	67	50	63	67	0	2	5	None
	MA20d	2	2	67	47	63	67	0	2	5	None
	MA21d	2	2	67	47	63	67	0	2	5	None
	MA22d	2	2	67	47	63	67	0	2	5	None
	MA23d	2	2	67	47	63	67	0	2	5	None
	MA24d	2	2	67	47	63	67	0	2	5	None
	MA25d	2	2	67	52	63	67	0	2	5	None





loise-Sensitive Area Jescription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres		Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impac
	MA26d	2	2	67	47	63	67	0	2	5	None
a Petite Academy (First 5)	First5	3	1	64	50	66	70	0	4	7	None
	SF1	2	13	71	44	66	70	0	3	7	None
	SF2	2	13	71	52	66	70	0	3	7	None
	SF3	2	13	71	45	66	70	0	3	7	None
	SF4	2	13	71	52	66	70	0	3	7	None
	SF5	2	13	71	46	66	70	0	3	7	None
	SF6	2	13	71	54	66	70	0	3	7	None
	SF7	2	13	71	45	66	70	0	3	7	None
	SF8	2	13	71	56	66	70	0	3	7	None
	SF9	2	13	71	46	66	70	0	3	7	None
	SF10	2	13	71	57	66	70	0	3	7	None
	SF11	2	13	71	47	66	70	0	3	7	None
ne Santa Fe Apartments	SF12	2	13	71	59	66	70	0	3	7	None
	SF13	2	13	71	47	66	70	0	3	7	None
	SF14	2	13	71	46	66	70	0	3	7	None
	SF15	2	13	71	46	66	70	0	3	7	None
	SF16	2	13	71	46	66	70	0	3	7	None
	SF17	2	13	71	46	66	70	0	3	7	None
	SF18	2	13	71	46	66	70	0	3	7	None
	SF19	2	13	71	45	66	70	0	3	7	None
	SF20	2	13	71	45	66	70	0	3	7	None
	SF21	2	13	71	46	66	70	0	3	7	None
	SF22	2	13	71	46	66	70	0	3	7	None
	SF23	2	13	71	46	66	70	0	3	7	None





Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thres		Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulativ Level Thr	/e Noise	FTA Level of Noise Impact
	SF24	2	13	71	58	66	70	0	3	7	None
	SF25	2	13	71	47	66	70	0	3	7	None
	SF26	2	13	71	58	66	70	0	3	7	None
	SF27	2	13	71	47	66	70	0	3	7	None
	SF28	2	13	71	59	66	70	0	3	7	None
	SF29	2	13	71	47	66	70	0	3	7	None
	SF30	2	13	71	59	66	70	0	3	7	None
	SF31	2	13	71	47	66	70	0	3	7	None
	SF32	2	13	71	47	66	70	0	3	7	None
	SF33	2	13	71	47	66	70	0	3	7	None
	SF34	2	13	71	48	66	70	0	3	7	None
Metro Gateway Childhood Development Center	GCC	3	1	64	51	66	70	0	3	7	None

dBA=A-weighted decibel; FTA=Federal Transit Administration; ID=identification; L_{dn}=day-night average sound level; L_{eq}=equivalent noise level; Metro=Los Angeles County Metropolitan Transportation Authority





loise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulativ Level Thr	ve Noise	FTA Level of Noise Impact
	WM1	3	1	66	55	67	72	0	2	5	None
	WM2	2	40	69	57	64	69	0	2	5	None
	WM3	2	40	69	54	64	69	0	2	5	None
	WM4	2	12	69	50	64	69	0	2	5	None
	WM5	2	11	69	54	64	69	0	2	5	None
	WM6	2	16	69	61	64	69	1	2	5	None
	WM7	2	38	69	58	64	69	0	2	5	None
illiam Mead Homes	WM8	2	24	69	67	64	69	2	2	5	Moderate
	WM9	2	46	69	56	64	69	0	2	5	None
	WM10	2	20	69	58	64	69	0	2	5	None
	WM11	2	40	69	52	64	69	0	2	5	None
	WM12	2	40	69	51	64	69	0	2	5	None
	WM13	2	32	69	51	64	69	0	2	5	None
	WM14	2	40	69	58	64	69	0	2	5	None
	WM15	2	16	69	53	64	69	0	2	5	None
	PK1	3	1	66	63	67	72	2	2	5	None
	HFC1	2	5	73	63	65	70	0	2	5	None
	HFC2	2	5	73	61	65	70	0	2	5	None
	HFC3	2	5	73	64	65	70	0	2	5	None
	HFC4	2	5	73	63	65	70	0	2	5	None
are First Village	HFC5	2	5	73	58	65	70	0	2	5	None
	HFC6	2	5	73	57	65	70	0	2	5	None
	HFC7	2	5	73	55	65	70	0	2	5	None
	HFC8	2	5	73	56	65	70	0	2	5	None
	HFC9	2	5	73	54	65	70	0	2	5	None





loise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Thres	e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulativ Level Thr	ve Noise	FTA Level of Noise Impact
	HFC10	2	5	73	53	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC13	2	20	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC16	2	24	73	55	65	70	0	2	5	None
	HFC17	0	0	73	63	65	70	0	2	5	None
	HFC18	2	5	73	61	65	70	0	2	5	None
	HFC19	2	5	73	62	65	70	0	2	5	None
	HFC20	2	5	73	59	65	70	0	2	5	None
	HFC21	2	5	73	59	65	70	0	2	5	None
	HFC22	2	5	73	53	65	70	0	2	5	None
	HFC23	2	5	73	53	65	70	0	2	5	None
	HFC24	2	5	73	52	65	70	0	2	5	None
	HFC25	2	5	73	52	65	70	0	2	5	None
	HFC26	2	5	73	51	65	70	0	2	5	None
	HFC27	2	5	73	52	65	70	0	2	5	None
	HFC28	3	1	71	61	75	80	0	3	5	None
etro Senior Housing	MT1	2	123	60	51	58	63	0	2	5	None
os Angeles Central Jail	CJ1	2	4000	73	59	66	71	0	2	5	None
vin Towers Correctional acility	TT1	2	9500	73	55	66	71	0	2	5	None
	MA12a	2	3	67	62	63	67	1	2	5	None
ozaic Apartments East iilding	MA13a	2	3	67	59	63	67	1	2	5	None
	MA14a	2	3	67	58	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Three	e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impac
	MA15a	2	3	67	56	63	67	0	2	5	None
	MA1a	2	3	67	58	63	67	0	2	5	None
	MA2a	2	3	67	57	63	67	0	2	5	None
	MA3a	2	3	67	55	63	67	0	2	5	None
	MA4a	2	3	67	54	63	67	0	2	5	None
	MA5a	2	3	67	52	63	67	0	2	5	None
	MA11a	2	3	67	49	63	67	0	2	5	None
	MA10a	2	3	67	50	63	67	0	2	5	None
	MA9a	2	3	67	50	63	67	0	2	5	None
	MA8a	2	3	67	51	63	67	0	2	5	None
	MA7a	2	3	67	51	63	67	0	2	5	None
	MA6a	2	3	67	52	63	67	0	2	5	None
	MA12b	2	3	67	63	63	67	1	2	5	Moderate
	MA13b	2	3	67	60	63	67	1	2	5	None
	MA14b	2	3	67	59	63	67	1	2	5	None
	MA15b	2	3	67	57	63	67	0	2	5	None
	MA1b	2	3	67	60	63	67	1	2	5	None
	MA2b	2	3	67	58	63	67	1	2	5	None
	MA3b	2	3	67	56	63	67	0	2	5	None
	MA4b	2	3	67	54	63	67	0	2	5	None
	MA5b	2	3	67	53	63	67	0	2	5	None
	MA11b	2	3	67	49	63	67	0	2	5	None
	MA10b	2	3	67	50	63	67	0	2	5	None
	MA9b	2	3	67	50	63	67	0	2	5	None
	MA8b	2	3	67	51	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulativ Level Thr	ve Noise	FTA Level of Noise Impac
	MA7b	2	3	67	51	63	67	0	2	5	None
	MA6b	2	3	67	52	63	67	0	2	5	None
	MA12c	2	3	67	63	63	67	2	2	5	Moderate
	MA13c	2	3	67	61	63	67	1	2	5	None
	MA14c	2	3	67	60	63	67	1	2	5	None
	MA15c	2	3	67	58	63	67	0	2	5	None
	MA1c	2	3	67	61	63	67	1	2	5	None
	MA2c	2	3	67	59	63	67	1	2	5	None
	MA3c	2	3	67	57	63	67	0	2	5	None
	MA4c	2	3	67	55	63	67	0	2	5	None
	MA5c	2	3	67	53	63	67	0	2	5	None
	MA11c	2	3	67	49	63	67	0	2	5	None
	MA10c	2	3	67	50	63	67	0	2	5	None
	MA9c	2	3	67	50	63	67	0	2	5	None
	MA8c	2	3	67	51	63	67	0	2	5	None
	MA7c	2	3	67	51	63	67	0	2	5	None
	MA6c	2	3	67	52	63	67	0	2	5	None
	MA12d	2	3	67	64	63	67	2	2	5	Moderate
	MA13d	2	3	67	62	63	67	1	2	5	None
	MA14d	2	3	67	60	63	67	1	2	5	None
	MA15d	2	3	67	59	63	67	1	2	5	None
	MA1d	2	3	67	62	63	67	1	2	5	None
	MA2d	2	3	67	60	63	67	1	2	5	None
	MA3d	2	3	67	57	63	67	0	2	5	None
	MA4d	2	3	67	56	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impac
	MA5d	2	3	67	54	63	67	0	2	5	None
	MA11d	2	3	67	49	63	67	0	2	5	None
	MA10d	2	3	67	50	63	67	0	2	5	None
	MA9d	2	3	67	50	63	67	0	2	5	None
	MA8d	2	3	67	51	63	67	0	2	5	None
	MA7d	2	3	67	51	63	67	0	2	5	None
	MA6d	2	3	67	52	63	67	0	2	5	None
	MA16a	2	2	67	50	63	67	0	2	5	None
	MA17a	2	2	67	50	63	67	0	2	5	None
	MA18a	2	2	67	49	63	67	0	2	5	None
	MA19a	2	2	67	49	63	67	0	2	5	None
	MA20a	2	2	67	46	63	67	0	2	5	None
	MA21a	2	2	67	46	63	67	0	2	5	None
	MA22a	2	2	67	46	63	67	0	2	5	None
	MA23a	2	2	67	46	63	67	0	2	5	None
ozaic Apartments West	MA24a	2	2	67	47	63	67	0	2	5	None
ilding	MA25a	2	2	67	50	63	67	0	2	5	None
	MA26a	2	2	67	47	63	67	0	2	5	None
	MA16b	2	2	67	51	63	67	0	2	5	None
	MA17b	2	2	67	50	63	67	0	2	5	None
	MA18b	2	2	67	50	63	67	0	2	5	None
	MA19b	2	2	67	49	63	67	0	2	5	None
	MA20b	2	2	67	46	63	67	0	2	5	None
	MA21b	2	2	67	46	63	67	0	2	5	None
	MA22b	2	2	67	46	63	67	0	2	5	None





oise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolut Three	e Impact sholds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulati Level Thr	ve Noise	FTA Level of Noise Impac
	MA23b	2	2	67	46	63	67	0	2	5	None
	MA24b	2	2	67	47	63	67	0	2	5	None
	MA25b	2	2	67	50	63	67	0	2	5	None
	MA26b	2	2	67	47	63	67	0	2	5	None
	MA16c	2	2	67	52	63	67	0	2	5	None
	MA17c	2	2	67	51	63	67	0	2	5	None
	MA18c	2	2	67	50	63	67	0	2	5	None
	MA19c	2	2	67	50	63	67	0	2	5	None
	MA20c	2	2	67	46	63	67	0	2	5	None
	MA21c	2	2	67	46	63	67	0	2	5	None
	MA22c	2	2	67	46	63	67	0	2	5	None
	MA23c	2	2	67	46	63	67	0	2	5	None
	MA24c	2	2	67	47	63	67	0	2	5	None
	MA25c	2	2	67	51	63	67	0	2	5	None
	MA26c	2	2	67	47	63	67	0	2	5	None
	MA16d	2	2	67	52	63	67	0	2	5	None
	MA17d	2	2	67	51	63	67	0	2	5	None
	MA18d	2	2	67	51	63	67	0	2	5	None
	MA19d	2	2	67	50	63	67	0	2	5	None
	MA20d	2	2	67	46	63	67	0	2	5	None
	MA21d	2	2	67	46	63	67	0	2	5	None
	MA22d	2	2	67	46	63	67	0	2	5	None
	MA23d	2	2	67	46	63	67	0	2	5	None
	MA24d	2	2	67	47	63	67	0	2	5	None
	MA25d	2	2	67	53	63	67	0	2	5	None





loise-Sensitive Area escription	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})		e Impact holds	Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulativ Level Thr	ve Noise	FTA Level of Noise Impac
	MA26d	2	2	67	47	63	67	0	2	5	None
a Petite Academy (First 5)	First5	3	1	64	50	66	70	0	4	7	None
	SF1	2	13	71	43	66	70	0	3	7	None
	SF2	2	13	71	53	66	70	0	3	7	None
	SF3	2	13	71	44	66	70	0	3	7	None
	SF4	2	13	71	53	66	70	0	3	7	None
	SF5	2	13	71	45	66	70	0	3	7	None
	SF6	2	13	71	55	66	70	0	3	7	None
	SF7	2	13	71	45	66	70	0	3	7	None
	SF8	2	13	71	56	66	70	0	3	7	None
	SF9	2	13	71	46	66	70	0	3	7	None
	SF10	2	13	71	58	66	70	0	3	7	None
	SF11	2	13	71	47	66	70	0	3	7	None
ne Santa Fe Apartments	SF12	2	13	71	59	66	70	0	3	7	None
	SF13	2	13	71	47	66	70	0	3	7	None
	SF14	2	13	71	46	66	70	0	3	7	None
	SF15	2	13	71	46	66	70	0	3	7	None
	SF16	2	13	71	46	66	70	0	3	7	None
	SF17	2	13	71	45	66	70	0	3	7	None
	SF18	2	13	71	45	66	70	0	3	7	None
	SF19	2	13	71	45	66	70	0	3	7	None
	SF20	2	13	71	45	66	70	0	3	7	None
	SF21	2	13	71	46	66	70	0	3	7	None
	SF22	2	13	71	46	66	70	0	3	7	None
	SF23	2	13	71	46	66	70	0	3	7	None





Noise-Sensitive Area Description	Receptor ID	Land Use Category	Number of Noise-Sensitive Sites Represented	Existing Noise Exposure (dBA L _{dn} or L _{eq})	Project Noise Exposure (dBA L _{dn} or L _{eq})	Absolute Thres		Cumulative Increase (dBA L _{dn} or L _{eq})	Increa Cumulativ Level Thr	ve Noise	FTA Level of Noise Impact
	SF24	2	13	71	59	66	70	0	3	7	None
	SF25	2	13	71	47	66	70	0	3	7	None
	SF26	2	13	71	59	66	70	0	3	7	None
	SF27	2	13	71	47	66	70	0	3	7	None
	SF28	2	13	71	59	66	70	0	3	7	None
	SF29	2	13	71	48	66	70	0	3	7	None
	SF30	2	13	71	59	66	70	0	3	7	None
	SF31	2	13	71	48	66	70	0	3	7	None
	SF32	2	13	71	48	66	70	0	3	7	None
	SF33	2	13	71	48	66	70	0	3	7	None
	SF34	2	13	71	48	66	70	0	3	7	None
Metro Gateway Childhood Development Center	GCC	3	1	64	52	66	70	0	3	7	None

dBA=A-weighted decibel; FTA=Federal Transit Administration; ID=identification; L_{dn}=day-night average sound level; L_{eq}=equivalent noise level; Metro=Los Angeles County Metropolitan Transportation Authority





Table C-6. Bı				, i i i i i i i i i i i i i i i i i i i		Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Westbank Yard	Segment 3 Westbank Yard	
Noise Sensitive Area Description	Receptor ID	Land Use Category	# of Noise- Sensitive Sites Represented	Segment 1: Throat Segment	Segment 2: Concourse Segment	Cast-in-drilled-hole piles	Superstructure placement	Pile driving for abutments	Bridge earthwork	Commercial Street earthwork	Commercial Street paving	Commercial Street concrete work	BNSF West Bank Yard earthwork	BNSF West Bank Yard rail placement	Noise Walls
	WM1	3	1	61	51	47	45	56	43	46	45	46	47	48	54
	WM2	2	40	61	50	47	45	56	43	45	44	45	47	48	54
	WM3	2	40	60	50	47	45	56	43	45	44	45	47	48	52
	WM4	2	12	63	52	48	46	57	44	46	45	46	47	48	57
	WM5	2	11	61	51	47	45	56	43	46	45	46	47	48	55
	WM6	2	16	79	51	48	46	57	44	46	45	46	49	50	76
	WM7	2	38	72	51	48	46	57	44	46	45	46	49	50	66
William Mead	WM8	2	24	76	52	48	46	57	44	47	46	47	49	50	70
Homes	WM9	2	46	71	52	48	46	57	44	47	46	47	49	50	66
	WM10	2	20	67	51	47	45	56	43	46	45	46	48	49	61
	WM11	2	40	64	51	47	45	56	43	46	45	46	48	49	58
	WM12	2	40	62	51	47	45	56	43	45	44	45	47	48	56
	WM13	2	32	64	51	48	46	57	44	46	45	46	48	49	57
	WM14	2	40	66	52	48	46	57	44	46	45	46	48	49	60
	WM15	2	16	65	52	48	46	57	44	46	45	46	48	49	59
	PK1	3	1	79	53	49	47	58	45	47	46	47	49	50	75
Metro Senior Housing	TT1	2	123	67	62	54	52	63	50	52	51	52	53	54	51
Los Angeles Central Jail	CJ1	2	4000	74	59	53	51	62	49	50	49	50	51	52	54
Twin Towers Correctional Facility	MT1	2	9500	58	55	50	48	59	46	47	46	47	47	48	49
	MA12a	2	3	75	84	60	58	69	56	55	54	55	52	53	46
	MA13a	2	3	73	82	59	57	68	55	54	53	54	52	53	46
Mozaic	MA14a	2	3	71	80	59	57	68	55	54	53	54	52	53	46
Apartments	MA15a	2	3	70	76	59	57	68	55	54	53	54	52	53	46
East Building	MA1a	2	3	80	80	58	56	67	54	54	53	54	52	53	47
	MA2a	2	3	75	75	58	56	67	54	54	53	54	51	52	47
	MA3a	2	3	72	72	58	56	67	54	53	52	53	51	52	47





			iction Noise (Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Westbank Yard	Segment 3 Westbank Yard	
Noise Sensitive Area Description	Receptor ID	Land Use Category	# of Noise- Sensitive Sites Represented	Segment 1: Throat Segment	Segment 2: Concourse Segment	Cast-in-drilled-hole piles	Superstructure placement	Pile driving for abutments	Bridge earthwork	Commercial Street earthwork	Commercial Street paving	Commercial Street concrete work	BNSF West Bank Yard earthwork	BNSF West Bank Yard rail placement	Noise Walls
	MA4a	2	3	70	70	57	55	66	53	53	52	53	51	52	46
	MA5a	2	3	68	68	57	55	66	53	53	52	53	51	52	46
	MA11a	2	3	70	72	58	56	67	54	53	52	53	51	52	46
	MA10a	2	3	71	73	58	56	67	54	54	53	54	51	52	46
	MA9a	2	3	73	74	58	56	67	54	54	53	54	51	52	46
	MA8a	2	3	74	75	59	57	68	55	54	53	54	52	53	46
	MA7a	2	3	76	77	59	57	68	55	54	53	54	52	53	46
	MA6a	2	3	78	80	59	57	68	55	54	53	54	52	53	46
	MA12b	2	3	75	84	60	58	69	56	55	54	55	52	53	46
	MA13b	2	3	73	82	59	57	68	55	54	53	54	52	53	46
	MA14b	2	3	71	80	59	57	68	55	54	53	54	52	53	46
	MA15b	2	3	70	76	59	57	68	55	54	53	54	52	53	46
	MA1b	2	3	80	80	58	56	67	54	54	53	54	52	53	47
	MA2b	2	3	75	75	58	56	67	54	54	53	54	51	52	47
	MA3b	2	3	72	72	58	56	67	54	53	52	53	51	52	47
	MA4b	2	3	70	70	57	55	66	53	53	52	53	51	52	46
	MA5b	2	3	68	68	57	55	66	53	53	52	53	51	52	46
	MA11b	2	3	70	72	58	56	67	54	53	52	53	51	52	46
	MA10b	2	3	71	73	58	56	67	54	54	53	54	51	52	46
	MA9b	2	3	73	74	58	56	67	54	54	53	54	51	52	46
	MA8b	2	3	74	75	59	57	68	55	54	53	54	52	53	46
	MA7b	2	3	76	77	59	57	68	55	54	53	54	52	53	46
	MA6b	2	3	78	80	59	57	68	55	54	53	54	52	53	46
	MA12c	2	3	75	84	60	58	69	56	55	54	55	52	53	46
	MA13c	2	3	73	82	59	57	68	55	54	53	54	52	53	46
	MA14c	2	3	71	80	59	57	68	55	54	53	54	52	53	46
	MA15c	2	3	70	76	59	57	68	55	54	53	54	52	53	46
	MA1c	2	3	80	80	58	56	67	54	54	53	54	52	53	47





Table C-6. B			uction Noise (aba Leqj		Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Westbank Yard	Segment 3 Westbank Yard	
Noise Sensitive Area Description	Receptor ID	Land Use Category	# of Noise- Sensitive Sites Represented	Segment 1: Throat Segment	Segment 2: Concourse Segment	Cast-in-drilled-hole piles	Superstructure placement	Pile driving for abutments	Bridge earthwork	Commercial Street earthwork	Commercial Street paving	Commercial Street concrete work	BNSF West Bank Yard earthwork	BNSF West Bank Yard rail placement	Noise Walls
	MA2c	2	3	75	75	58	56	67	54	54	53	54	51	52	47
	MA3c	2	3	72	72	58	56	67	54	53	52	53	51	52	47
	MA4c	2	3	70	70	57	55	66	53	53	52	53	51	52	46
	MA5c	2	3	68	68	57	55	66	53	53	52	53	51	52	46
	MA11c	2	3	70	72	58	56	67	54	53	52	53	51	52	46
	MA10c	2	3	71	73	58	56	67	54	54	53	54	51	52	46
	MA9c	2	3	73	74	58	56	67	54	54	53	54	51	52	46
	MA8c	2	3	74	75	59	57	68	55	54	53	54	52	53	46
	MA7c	2	3	76	77	59	57	68	55	54	53	54	52	53	46
	MA6c	2	3	78	80	59	57	68	55	54	53	54	52	53	46
	MA12d	2	3	75	84	60	58	69	56	55	54	55	52	53	46
	MA13d	2	3	73	82	59	57	68	55	54	53	54	52	53	46
	MA14d	2	3	71	80	59	57	68	55	54	53	54	52	53	46
	MA15d	2	3	70	76	59	57	68	55	54	53	54	52	53	46
	MA1d	2	3	80	80	58	56	67	54	54	53	54	52	53	47
	MA2d	2	3	75	75	58	56	67	54	54	53	54	51	52	47
	MA3d	2	3	72	72	58	56	67	54	53	52	53	51	52	47
	MA4d	2	3	70	70	57	55	66	53	53	52	53	51	52	46
	MA5d	2	3	68	68	57	55	66	53	53	52	53	51	52	46
	MA11d	2	3	70	72	58	56	67	54	53	52	53	51	52	46
	MA10d	2	3	71	73	58	56	67	54	54	53	54	51	52	46
	MA9d	2	3	73	74	58	56	67	54	54	53	54	51	52	46
	MA8d	2	3	74	75	59	57	68	55	54	53	54	52	53	46
	MA7d	2	3	76	77	59	57	68	55	54	53	54	52	53	46
	MA6d	2	3	78	80	59	57	68	55	54	53	54	52	53	46
Mozaic	MA16a	2	2	66	66	57	55	66	53	52	51	52	50	51	46
Apartments West Building	MA17a	2	2	64	65	56	54	65	52	52	51	52	50	51	46
west building	MA18a	2	2	64	65	56	54	65	52	52	51	52	50	51	46





			iction Noise (Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Westbank Yard	Segment 3 Westbank Yard	
Noise Sensitive Area Description	Receptor ID	Land Use Category	# of Noise- Sensitive Sites Represented	Segment 1: Throat Segment	Segment 2: Concourse Segment	Cast-in-drilled-hole piles	Superstructure placement	Pile driving for abutments	Bridge earthwork	Commercial Street earthwork	Commercial Street paving	Commercial Street concrete work	BNSF West Bank Yard earthwork	BNSF West Bank Yard rail placement	Noise Walls
	MA19a	2	2	63	64	56	54	65	52	52	51	52	50	51	46
	MA20a	2	2	62	63	56	54	65	52	52	51	52	50	51	46
	MA21a	2	2	62	64	56	54	65	52	52	51	52	50	51	45
	MA22a	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA23a	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA24a	2	2	64	66	57	55	66	53	53	52	53	50	51	45
	MA25a	2	2	66	68	58	56	67	54	53	52	53	51	52	46
	MA26a	2	2	64	65	57	55	66	53	52	51	52	50	51	46
	MA16b	2	2	66	66	57	55	66	53	52	51	52	50	51	46
	MA17b	2	2	64	65	56	54	65	52	52	51	52	50	51	46
	MA18b	2	2	64	65	56	54	65	52	52	51	52	50	51	46
	MA19b	2	2	63	64	56	54	65	52	52	51	52	50	51	46
	MA20b	2	2	62	63	56	54	65	52	52	51	52	50	51	46
	MA21b	2	2	62	64	56	54	65	52	52	51	52	50	51	45
	MA22b	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA23b	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA24b	2	2	64	66	57	55	66	53	53	52	53	50	51	45
	MA25b	2	2	66	68	58	56	67	54	53	52	53	51	52	46
	MA26b	2	2	64	65	57	55	66	53	52	51	52	50	51	46
	MA16c	2	2	66	66	57	55	66	53	52	51	52	50	51	46
	MA17c	2	2	64	65	56	54	65	52	52	51	52	50	51	46
	MA18c	2	2	64	65	56	54	65	52	52	51	52	50	51	46
	MA19c	2	2	63	64	56	54	65	52	52	51	52	50	51	46
	MA20c	2	2	62	63	56	54	65	52	52	51	52	50	51	46
	MA21c	2	2	62	64	56	54	65	52	52	51	52	50	51	45
	MA22c	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA23c	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA24c	2	2	64	66	57	55	66	53	53	52	53	50	51	45





Гable С-6. Вւ						Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Westbank Yard	Segment 3 Westbank Yard	
Noise Sensitive Area Description	Receptor ID	Land Use Category	# of Noise- Sensitive Sites Represented	Segment 1: Throat Segment	Segment 2: Concourse Segment	Cast-in-drilled-hole piles	Superstructure placement	Pile driving for abutments	Bridge earthwork	Commercial Street earthwork	Commercial Street paving	Commercial Street concrete work	BNSF West Bank Yard earthwork	BNSF West Bank Yard rail placement	Noise Walls
	MA25c	2	2	66	68	58	56	67	54	53	52	53	51	52	46
	MA26c	2	2	64	65	57	55	66	53	52	51	52	50	51	46
	MA16d	2	2	66	66	57	55	66	53	52	51	52	50	51	46
	MA17d	2	2	64	65	56	54	65	52	52	51	52	50	51	46
	MA18d	2	2	64	65	56	54	65	52	52	51	52	50	51	46
	MA19d	2	2	63	64	56	54	65	52	52	51	52	50	51	46
	MA20d	2	2	62	63	56	54	65	52	52	51	52	50	51	46
	MA21d	2	2	62	64	56	54	65	52	52	51	52	50	51	45
	MA22d	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA23d	2	2	62	64	57	55	66	53	52	51	52	50	51	45
	MA24d	2	2	64	66	57	55	66	53	53	52	53	50	51	45
	MA25d	2	2	66	68	58	56	67	54	53	52	53	51	52	46
	MA26d	2	2	64	65	57	55	66	53	52	51	52	50	51	46
	SF1	2	13	46	48	49	47	58	45	48	47	48	61	62	36
	SF2	2	13	46	48	49	47	58	45	49	48	49	62	63	37
	SF3	2	13	47	49	49	47	58	45	49	48	49	61	62	37
	SF4	2	13	47	49	49	47	58	45	49	48	49	63	64	37
	SF5	2	13	47	49	49	47	58	45	49	48	49	62	63	37
	SF6	2	13	47	49	49	47	58	45	49	48	49	64	65	37
	SF7	2	13	47	49	50	48	59	46	49	48	49	63	64	37
One Santa Fe Apartments	SF8	2	13	47	49	50	48	59	46	50	49	50	65	66	37
hpartments	SF9	2	13	47	49	50	48	59	46	50	49	50	64	65	37
	SF10	2	13	47	50	50	48	59	46	50	49	50	66	67	37
	SF11	2	13	48	50	50	48	59	46	50	49	50	65	66	37
	SF12	2	13	48	50	51	49	60	47	50	49	50	67	68	37
	SF13	2	13	48	50	51	49	60	47	50	49	50	64	65	37
	SF14	2	13	48	50	51	49	60	47	50	49	50	64	65	37
	SF15	2	13	47	50	50	48	59	46	50	49	50	63	64	37





Table C-6. B						Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Westbank Yard	Segment 3 Westbank Yard	
Noise Sensitive Area Description	Receptor ID	Land Use Category	# of Noise- Sensitive Sites Represented	Segment 1: Throat Segment	Segment 2: Concourse Segment	Cast-in-drilled-hole piles	Superstructure placement	Pile driving for abutments	Bridge earthwork	Commercial Street earthwork	Commercial Street paving	Commercial Street concrete work	BNSF West Bank Yard earthwork	BNSF West Bank Yard rail placement	Noise Walls
	SF16	2	13	47	50	50	48	59	46	50	49	50	63	64	37
	SF17	2	13	47	49	50	48	59	46	50	49	50	63	64	37
	SF18	2	13	47	49	50	48	59	46	49	48	49	63	64	37
	SF19	2	13	47	49	50	48	59	46	49	48	49	62	63	37
	SF20	2	13	47	49	50	48	59	46	50	49	50	62	63	37
	SF21	2	13	47	50	50	48	59	46	50	49	50	62	63	37
	SF22	2	13	48	50	51	49	60	47	50	49	50	63	64	37
	SF23	2	13	48	50	51	49	60	47	51	50	51	63	64	37
	SF24	2	13	48	50	51	49	60	47	51	50	51	65	66	38
	SF25	2	13	48	51	52	50	61	48	51	50	51	64	65	38
	SF26	2	13	48	51	52	50	61	48	52	51	52	65	66	38
	SF27	2	13	49	51	52	50	61	48	52	51	52	64	65	38
	SF28	2	13	49	51	53	51	62	49	52	51	52	66	67	38
	SF29	2	13	49	52	53	51	62	49	53	52	53	65	66	38
	SF30	2	13	49	52	53	51	62	49	53	52	53	67	68	38
	SF31	2	13	49	52	54	52	63	50	53	52	53	65	66	38
	SF32	2	13	49	52	54	52	63	50	54	53	54	65	66	39
	SF33	2	13	50	53	54	52	63	50	54	53	54	66	67	39
	SF34	2	13	50	53	54	52	63	50	54	53	54	66	67	39
	HFC 1	2	5	82	69	62	60	71	58	60	59	60	60	61	75
	HFC 2	2	5	82	68	62	60	71	58	60	59	60	60	61	75
	HFC 3	2	5	76	69	62	60	71	58	60	59	60	60	61	69
	HFC 4	2	5	77	68	62	60	71	58	60	59	60	60	61	70
Care First Village	HFC 5	2	5	72	69	62	60	71	58	60	59	60	60	61	65
Ũ	HFC 6	2	5	73	68	62	60	71	58	60	59	60	60	61	66
	HFC 7	2	5	74	68	62	60	71	58	59	58	59	60	61	67
	HFC 8	2	5	69	68	62	60	71	58	60	59	60	60	61	62
	HFC 9	2	5	70	68	62	60	71	58	59	58	59	60	61	63





						Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Viaduct	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Commercial Street	Segment 3 Westbank Yard	Segment 3 Westbank Yard	
Noise Sensitive Area Description	Receptor ID	Land Use Category	# of Noise- Sensitive Sites Represented	Segment 1: Throat Segment	Segment 2: Concourse Segment	Cast-in-drilled-hole piles	Superstructure placement	Pile driving for abutments	Bridge earthwork	Commercial Street earthwork	Commercial Street paving	Commercial Street concrete work	BNSF West Bank Yard earthwork	BNSF West Bank Yard rail placement	Noise Walls
	HFC 10	2	5	72	68	62	60	71	58	59	58	59	60	61	65
	HFC 13	2	60	68	67	61	59	70	57	59	58	59	59	60	61
	HFC 16	2	72	67	67	61	59	70	57	59	58	59	59	60	60
	HFC 17	2	0	80	67	62	60	71	58	59	58	59	60	61	73
	HFC 18	2	5	79	69	62	60	71	58	60	59	60	60	61	72
	HFC 19	2	5	80	68	62	60	71	58	60	59	60	60	61	73
	HFC 20	2	5	76	68	62	60	71	58	60	59	60	60	61	69
	HFC 21	2	5	75	69	62	60	71	58	60	59	60	60	61	68
	HFC 22	2	5	71	69	62	60	71	58	60	59	60	60	61	64
	HFC 23	2	5	72	68	62	60	71	58	60	59	60	60	61	65
	HFC 24	2	5	73	68	62	60	71	58	59	58	59	60	61	66
	HFC 25	2	5	69	68	62	60	71	58	59	58	59	59	60	62
	HFC 26	2	5	70	68	62	60	71	58	59	58	59	59	60	63
	HFC 27	2	5	71	68	62	60	71	58	59	58	59	60	61	64
Metro Gateway	HFC 28	3	1	80	69	63	61	72	59	60	59	60	60	61	73
Childhood Development Center	GCC	3	1	67	75	60	58	69	56	57	56	57	56	57	60

dBA=A-weighted decibel; FTA=Federal Transit Administration; ID=identification; Leq=equivalent noise level



Receptor	# of Noise-Sensitive Sites	Pile Driver	Pile Driver	Roller	Roller	Damage	Annoyance	Pile Driver Typical	Pile Driver Typical	Roller Damage	Roller Annoyance
ID	Represented	Typical PPV	Typical VdB	PPV	VdB	Threshold PPV	Threshold VdB	Damage Impact	Annoyance Impact	Impact	Impact
WM2	40	0.003	57	0.001	47	0.2	80	No Impact	No Impact	No Impact	No Impact
WM3	40	0.002	55	0.001	45	0.2	80	No Impact	No Impact	No Impact	No Impact
WM4	12	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
WM5	11	0.003	58	0.001	48	0.2	80	No Impact	No Impact	No Impact	No Impact
WM6	16	0.074	85	0.024	75	0.2	80	No Impact	Impact	No Impact	No Impact
WM7	38	0.022	74	0.007	64	0.2	80	No Impact	No Impact	No Impact	No Impact
WM8	24	0.039	80	0.013	70	0.2	80	No Impact	No Impact	No Impact	No Impact
WM9	46	0.017	73	0.006	63	0.2	80	No Impact	No Impact	No Impact	No Impact
WM10	20	0.009	67	0.003	57	0.2	80	No Impact	No Impact	No Impact	No Impact
WM11	40	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
WM12	40	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
WM13	32	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
WM14	40	0.007	65	0.002	55	0.2	80	No Impact	No Impact	No Impact	No Impact
WM15	16	0.006	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
TT1	123	0.009	67	0.003	57	0.2	80	No Impact	No Impact	No Impact	No Impact
CJ1	4000	0.030	77	0.010	67	0.2	80	No Impact	No Impact	No Impact	No Impact
MT1	9500	0.002	53	0.001	43	0.2	80	No Impact	No Impact	No Impact	No Impact
MA12a	3	0.034	78	0.011	68	0.2	80	No Impact	No Impact	No Impact	No Impact
MA13a	3	0.026	76	0.008	66	0.2	80	No Impact	No Impact	No Impact	No Impact
MA14a	3	0.019	73	0.006	63	0.2	80	No Impact	No Impact	No Impact	No Impact
MA15a	3	0.014	71	0.005	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA1a	3	0.084	86	0.027	76	0.2	80	No Impact	Impact	No Impact	No Impact
MA2a	3	0.037	79	0.012	69	0.2	80	No Impact	No Impact	No Impact	No Impact
MA3a	3	0.020	74	0.007	64	0.2	80	No Impact	No Impact	No Impact	No Impact





Receptor	# of Noise-Sensitive Sites	Pile Driver	Pile Driver	Roller	Roller	Damage	Annoyance	Pile Driver Typical	Pile Driver Typical	Roller Damage	Roller Annoyance
ID	Represented	Typical PPV	Typical VdB	PPV	VdB	Threshold PPV	Threshold VdB	Damage Impact	Annoyance Impact	Impact	Impact
MA4a	3	0.014	71	0.004	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA5a	3	0.010	68	0.003	58	0.2	80	No Impact	No Impact	No Impact	No Impact
MA11a	3	0.013	70	0.004	60	0.2	80	No Impact	No Impact	No Impact	No Impact
MA10a	3	0.017	72	0.005	62	0.2	80	No Impact	No Impact	No Impact	No Impact
MA9a	3	0.023	75	0.007	65	0.2	80	No Impact	No Impact	No Impact	No Impact
MA8a	3	0.030	77	0.010	67	0.2	80	No Impact	No Impact	No Impact	No Impact
MA7a	3	0.040	80	0.013	70	0.2	80	No Impact	No Impact	No Impact	No Impact
MA6a	3	0.056	83	0.018	73	0.2	80	No Impact	Impact	No Impact	No Impact
MA12b	3	0.034	78	0.011	68	0.2	80	No Impact	No Impact	No Impact	No Impact
MA13b	3	0.026	76	0.008	66	0.2	80	No Impact	No Impact	No Impact	No Impact
MA14b	3	0.019	73	0.006	63	0.2	80	No Impact	No Impact	No Impact	No Impact
MA15b	3	0.014	71	0.005	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA1b	3	0.084	86	0.027	76	0.2	80	No Impact	Impact	No Impact	No Impact
MA2b	3	0.037	79	0.012	69	0.2	80	No Impact	No Impact	No Impact	No Impact
MA3b	3	0.020	74	0.007	64	0.2	80	No Impact	No Impact	No Impact	No Impact
MA4b	3	0.014	71	0.004	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA5b	3	0.010	68	0.003	58	0.2	80	No Impact	No Impact	No Impact	No Impact
MA11b	3	0.013	70	0.004	60	0.2	80	No Impact	No Impact	No Impact	No Impact
MA10b	3	0.017	72	0.005	62	0.2	80	No Impact	No Impact	No Impact	No Impact
MA9b	3	0.023	75	0.007	65	0.2	80	No Impact	No Impact	No Impact	No Impact
MA8b	3	0.030	77	0.010	67	0.2	80	No Impact	No Impact	No Impact	No Impact
MA7b	3	0.040	80	0.013	70	0.2	80	No Impact	No Impact	No Impact	No Impact
MA6b	3	0.056	83	0.018	73	0.2	80	No Impact	Impact	No Impact	No Impact
MA12c	3	0.034	78	0.011	68	0.2	80	No Impact	No Impact	No Impact	No Impact





Receptor	# of Noise-Sensitive Sites	Pile Driver	Pile Driver	Roller	Roller	Damage	Annoyance	Pile Driver Typical	Pile Driver Typical	Roller Damage	Roller Annoyance
ID	Represented	Typical PPV	Typical VdB	PPV	VdB	Threshold PPV	Threshold VdB	Damage Impact	Annoyance Impact	Impact	Impact
MA13c	3	0.026	76	0.008	66	0.2	80	No Impact	No Impact	No Impact	No Impact
MA14c	3	0.019	73	0.006	63	0.2	80	No Impact	No Impact	No Impact	No Impact
MA15c	3	0.014	71	0.005	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA1c	3	0.084	86	0.027	76	0.2	80	No Impact	Impact	No Impact	No Impact
MA2c	3	0.037	79	0.012	69	0.2	80	No Impact	No Impact	No Impact	No Impact
MA3c	3	0.020	74	0.007	64	0.2	80	No Impact	No Impact	No Impact	No Impact
MA4c	3	0.014	71	0.004	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA5c	3	0.010	68	0.003	58	0.2	80	No Impact	No Impact	No Impact	No Impact
MA11c	3	0.013	70	0.004	60	0.2	80	No Impact	No Impact	No Impact	No Impact
MA10c	3	0.017	72	0.005	62	0.2	80	No Impact	No Impact	No Impact	No Impact
MA9c	3	0.023	75	0.007	65	0.2	80	No Impact	No Impact	No Impact	No Impact
MA8c	3	0.030	77	0.010	67	0.2	80	No Impact	No Impact	No Impact	No Impact
MA7c	3	0.040	80	0.013	70	0.2	80	No Impact	No Impact	No Impact	No Impact
MA6c	3	0.056	83	0.018	73	0.2	80	No Impact	Impact	No Impact	No Impact
MA12d	3	0.034	78	0.011	68	0.2	80	No Impact	No Impact	No Impact	No Impact
MA13d	3	0.026	76	0.008	66	0.2	80	No Impact	No Impact	No Impact	No Impact
MA14d	3	0.019	73	0.006	63	0.2	80	No Impact	No Impact	No Impact	No Impact
MA15d	3	0.014	71	0.005	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA1d	3	0.084	86	0.027	76	0.2	80	No Impact	Impact	No Impact	No Impact
MA2d	3	0.037	79	0.012	69	0.2	80	No Impact	No Impact	No Impact	No Impact
MA3d	3	0.020	74	0.007	64	0.2	80	No Impact	No Impact	No Impact	No Impact
MA4d	3	0.014	71	0.004	61	0.2	80	No Impact	No Impact	No Impact	No Impact
MA5d	3	0.010	68	0.003	58	0.2	80	No Impact	No Impact	No Impact	No Impact
MA11d	3	0.013	70	0.004	60	0.2	80	No Impact	No Impact	No Impact	No Impact





Receptor	# of Noise-Sensitive Sites	Pile Driver	Pile Driver	Roller	Roller	Damage	Annoyance	Pile Driver Typical	Pile Driver Typical	Roller Damage	Roller Annoyance
ID	Represented	Typical PPV	Typical VdB	PPV	VdB	Threshold PPV	Threshold VdB	Damage Impact	Annoyance Impact	Impact	Impact
MA10d	3	0.017	72	0.005	62	0.2	80	No Impact	No Impact	No Impact	No Impact
MA9d	3	0.023	75	0.007	65	0.2	80	No Impact	No Impact	No Impact	No Impact
MA8d	3	0.030	77	0.010	67	0.2	80	No Impact	No Impact	No Impact	No Impact
MA7d	3	0.040	80	0.013	70	0.2	80	No Impact	No Impact	No Impact	No Impact
MA6d	3	0.056	83	0.018	73	0.2	80	No Impact	Impact	No Impact	No Impact
MA16a	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
MA17a	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA18a	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA19a	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA20a	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA21a	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA22a	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
MA23a	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
MA24a	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA25a	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
MA26a	2	0.005	61	0.002	51	0.2	80	No Impact	No Impact	No Impact	No Impact
MA16b	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
MA17b	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA18b	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA19b	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA20b	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA21b	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA22b	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
MA23b	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact





Receptor	# of Noise-Sensitive Sites	Pile Driver	Pile Driver	Roller	Roller	Damage	Annoyance	Pile Driver Typical	Pile Driver Typical	Roller Damage	Roller Annoyance
ID	Represented	Typical PPV	Typical VdB	PPV	VdB	Threshold PPV	Threshold VdB	Damage Impact	Annoyance Impact	Impact	Impact
MA24b	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA25b	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
MA26b	2	0.005	61	0.002	51	0.2	80	No Impact	No Impact	No Impact	No Impact
MA16c	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
MA17c	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA18c	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA19c	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA20c	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA21c	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA22c	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
MA23c	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
MA24c	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA25c	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
MA26c	2	0.005	61	0.002	51	0.2	80	No Impact	No Impact	No Impact	No Impact
MA16d	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact
MA17d	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA18d	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA19d	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA20d	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA21d	2	0.004	60	0.001	50	0.2	80	No Impact	No Impact	No Impact	No Impact
MA22d	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
MA23d	2	0.004	59	0.001	49	0.2	80	No Impact	No Impact	No Impact	No Impact
MA24d	2	0.005	62	0.002	52	0.2	80	No Impact	No Impact	No Impact	No Impact
MA25d	2	0.007	64	0.002	54	0.2	80	No Impact	No Impact	No Impact	No Impact





Table C-7	. Build Alternative 1 Cons	truction Vibrati	ion								
Receptor ID	# of Noise-Sensitive Sites Represented	Pile Driver Typical PPV	Pile Driver Typical VdB	Roller PPV	Roller VdB	Damage Threshold PPV	Annoyance Threshold VdB	Pile Driver Typical Damage Impact	Pile Driver Typical Annoyance Impact	Roller Damage Impact	Roller Annoyance Impact
MA26d	2	0.005	61	0.002	51	0.2	80	No Impact	No Impact	No Impact	No Impact
SF1	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF2	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF3	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF4	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF5	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF6	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF7	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF8	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF9	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF10	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF11	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF12	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF13	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF14	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF15	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF16	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF17	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF18	13	0.000	36	0.000	26	0.2	80	No Impact	No Impact	No Impact	No Impact
SF19	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF20	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF21	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF22	13	0.000	37	0.000	27	0.2	80	No Impact	No Impact	No Impact	No Impact
SF23	13	0.000	38	0.000	28	0.2	80	No Impact	No Impact	No Impact	No Impact





Receptor	# of Noise-Sensitive Sites	Pile Driver	Pile Driver	Roller	Roller	Damage	Annoyance	Pile Driver Typical	Pile Driver Typical	Roller Damage	Roller Annoyance
ID	Represented	Typical PPV	Typical VdB	PPV	VdB	Threshold PPV	Threshold VdB	Damage Impact	Annoyance Impact	Impact	Impact
SF24	13	0.000	38	0.000	28	0.2	80	No Impact	No Impact	No Impact	No Impact
SF25	13	0.000	38	0.000	28	0.2	80	No Impact	No Impact	No Impact	No Impact
SF26	13	0.000	39	0.000	29	0.2	80	No Impact	No Impact	No Impact	No Impact
SF27	13	0.000	39	0.000	29	0.2	80	No Impact	No Impact	No Impact	No Impact
SF28	13	0.000	39	0.000	29	0.2	80	No Impact	No Impact	No Impact	No Impact
SF29	13	0.000	39	0.000	29	0.2	80	No Impact	No Impact	No Impact	No Impact
SF30	13	0.000	40	0.000	30	0.2	80	No Impact	No Impact	No Impact	No Impact
SF31	13	0.000	40	0.000	30	0.2	80	No Impact	No Impact	No Impact	No Impact
SF32	13	0.000	40	0.000	30	0.2	80	No Impact	No Impact	No Impact	No Impact
SF33	13	0.000	40	0.000	30	0.2	80	No Impact	No Impact	No Impact	No Impact
SF34	13	0.000	41	0.000	31	0.2	80	No Impact	No Impact	No Impact	No Impact
WM1	1	0.003	57	0.001	47	0.2	80	No Impact	No Impact	No Impact	No Impact
PK1	1	0.065	84	0.021	74	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 1	5	0.656	104	0.214	94	0.2	80	Impact	Impact	Impact	Impact
HFC 2	5	0.711	105	0.232	95	0.2	80	Impact	Impact	Impact	Impact
HFC 3	5	0.241	95	0.079	85	0.2	80	Impact	Impact	No Impact	Impact
HFC 4	5	0.293	97	0.096	87	0.2	80	Impact	Impact	No Impact	Impact
HFC 5	5	0.117	89	0.038	79	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 6	5	0.135	90	0.044	80	0.2	80	No Impact	Impact	No Impact	Impact
HFC 7	5	0.177	93	0.058	83	0.2	80	No Impact	Impact	No Impact	Impact
HFC 8	5	0.078	86	0.025	76	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 9	5	0.090	87	0.029	77	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 10	5	0.119	89	0.039	79	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 13	60	0.061	84	0.020	74	0.2	80	No Impact	Impact	No Impact	No Impact





Table C-7. Build Alternative 1 Construction Vibration											
Receptor ID	# of Noise-Sensitive Sites Represented	Pile Driver Typical PPV	Pile Driver Typical VdB	Roller PPV	Roller VdB	Damage Threshold PPV	Annoyance Threshold VdB	Pile Driver Typical Damage Impact	Pile Driver Typical Annoyance Impact	Roller Damage Impact	Roller Annoyance Impact
HFC 16	72	0.048	81	0.016	71	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 17	0	0.447	101	0.146	91	0.2	80	Impact	Impact	No Impact	Impact
HFC 18	5	0.440	101	0.143	91	0.2	80	Impact	Impact	No Impact	Impact
HFC 19	5	0.480	101	0.157	91	0.2	80	Impact	Impact	No Impact	Impact
HFC 20	5	0.224	95	0.073	85	0.2	80	Impact	Impact	No Impact	Impact
HFC 21	5	0.193	94	0.063	84	0.2	80	No Impact	Impact	No Impact	Impact
HFC 22	5	0.105	88	0.034	78	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 23	5	0.115	89	0.037	79	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 24	5	0.151	91	0.049	81	0.2	80	No Impact	Impact	No Impact	Impact
HFC 25	5	0.072	85	0.023	75	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 26	5	0.082	86	0.027	76	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 27	5	0.105	88	0.034	78	0.2	80	No Impact	Impact	No Impact	No Impact
HFC 28	1	0.457	101	0.149	91	0.2	80	Impact	Impact	No Impact	Impact
GCC	1	0.008	66	0.003	56	0.2	80	No Impact	No Impact	No Impact	No Impact

Notes:

ID=identification; PPV=peak particle velocity; VdB=Vibration velocity level in decibels



