

## 4.4 NOISE AND VIBRATION

This section evaluates the noise and vibration impacts of the proposed Amendment and discusses any changes to the existing conditions and regulatory setting since the preparation of the approved Plan PEIR.

### 4.4.1 EXISTING CONDITIONS

The existing conditions included in Section 4.13, *Noise and Vibration*, of the approved Plan PEIR are consistent with this evaluation and have not materially changed since the preparation of the approved Plan PEIR.

### 4.4.2 REGULATORY SETTING

The regulatory setting in Section 4.13, *Noise and Vibration*, of the approved Plan PEIR included relevant federal, State, regional, and local regulations. The regulatory setting included in Section 4.13 of the approved Plan PEIR is consistent with this evaluation and has not materially changed since the preparation of the approved Plan PEIR.

### 4.4.3 SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines provides criteria for evaluating the significance of a project's environmental impacts on noise, in the form of Initial Study checklist questions. This SEIR uses the same significance criteria specifically developed for the approved Plan PEIR that were based on the Appendix G checklist questions provided from the updates to the CEQA Guidelines (OPR 2018), with modifications. For the purposes of this SEIR, the proposed Amendment would have a significant noise impact if it would result in:

- NOI-1**            Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or generate a substantial absolute increase in ambient noise.
- NOI-2**            Generation of excessive groundborne vibration or groundborne noise levels.

The approved Plan PEIR included one additional significance threshold for noise and vibration (NOI-3). However, as discussed in Chapter 1, *Introduction*, of this SEIR, it was determined that project modifications associated with the proposed Amendment would not alter the impact conclusion described in the approved Plan PEIR for NOI-3. Therefore, only NOI-1 and NOI-2 are discussed in the impact analysis that follows.

- NOI-3**            For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would expose people residing or working in the project area to excessive noise levels.

#### 4.4.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

**NOI-1            GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES; OR GENERATE A SUBSTANTIAL ABSOLUTE INCREASE IN AMBIENT NOISE**

#### ANALYSIS METHODOLOGY

This section discusses the construction and operation noise impacts of forecasted regional growth and land use change, and planned transportation network improvements outlined in the approved Plan in comparison to the approved Plan as amended by the proposed Amendment. Impacts discussed in this section are based on applicable noise standards and guidelines from city and county general plans (i.e., noise elements) and noise ordinances, or federal or State agencies (e.g., the Federal Transit Administration and Caltrans) which are included in Section 4.13 of the approved Plan PEIR. Noise impacts (NOI-1) would be considered significant if changes associated with the proposed Amendment would result in a substantial increase in ambient noise levels above what was identified in the approved Plan PEIR and exceed the applicable established noise standards required based on the type of project (e.g., local development, transit, highway projects).

Consistent with the analysis in the approved Plan PEIR, local construction and operational noise standards, determined at the project level, may apply to regional growth and land use change, as well as local transportation network improvements. As outlined under *Regional and Local Laws, Regulations, Plans, and Policies* in Section 4.13 of the approved Plan PEIR, these local standards are typically supplied by the local noise element (noise/land use compatibility) for transportation noise, and the noise ordinance (municipal code) for non-transportation noise sources including construction. Specific types of projects such as federal oversight (e.g., Caltrans/Federal Highway Administration, Federal Transit Administration/Federal Railroad Administration) or projects that occur within certain jurisdictions may require adherence to multiple jurisdictional requirements, including federal, State, and/or local.

The approved Plan PEIR did not provide detailed quantitative analysis of potential impacts given the high-level (programmatic) nature of the approved Plan and the lack of specific project details. Consistent with the analysis in the approved Plan PEIR, the analysis of this proposed Amendment is qualitative.

#### IMPACT ANALYSIS

##### 2025, 2035, and 2050

The proposed Amendment would not change land use or anticipated growth within the region from what was analyzed in the approved Plan PEIR, and no new noise-sensitive receptors would be anticipated. Additionally, no new transportation network or facility improvements are included in the proposed Amendment, and there would be no associated impact on construction and operational noise. Mitigation measure **NOI-1a (Implement Construction Noise Reduction Measures for Development Projects and Transportation Network Improvements)** would continue to be applicable to the approved Plan as amended by the proposed Amendment. Because no new construction is anticipated, construction impacts of land use, anticipated growth, and transportation network improvements as they relate to noise would remain unchanged from the approved Plan PEIR.

The proposed Amendment would remove the regional road usage charge as discussed in Section 4.5, *Transportation*, of this SEIR. Table 4.4-1 shows the relative increase in vehicle miles traveled (VMT) and the resulting increase in noise levels associated with the change.

**Table 4.4-1**  
**VMT and Noise Increase Associated with the Approved Plan vs the Proposed Amendment**

Horizon Year <sup>1</sup>	Approved Plan (VMT)	Proposed Amendment (VMT)	Difference in VMT Between Approved Plan and Proposed Amendment	Predicted Increase in Noise Level Associated with VMT Increase (decibels)
2035	85,412,968	87,131,224	1,718,256	>0.1
2050	88,133,934	89,846,864	1,712,930	>0.1

<sup>1</sup> The regional road usage charge would not take effect until after the 2025 horizon year. Therefore, there would be no anticipated change associated with the regional road usage charge between the approved Plan and the proposed Amendment during the 2025 horizon year.

A doubling of the noise source, (i.e., twice as much traffic) would result in a 3 decibel (dB) increase (Harris 1979). The change associated with the removal of the regional road usage charge would result in an increase in operational VMT of approximately 2 percent, which would result in a predicted increase in operational noise of less than 0.1 dB. Therefore, the removal of the regional road usage charge would not result in impacts associated with the proposed Amendment that would be substantially more than the impacts identified in the approved Plan PEIR. Mitigation measures **NOI-1b (Implement Operational Noise Reduction Measures for Transportation Network Improvements)** and **NOI-1c (Implement Operational Noise Reduction Measures for Development Projects)** would still apply to the proposed Amendment due to the slight increase in operational noise from an increase in traffic volume.

### **Conclusion**

**No New or Substantially More Severe Significant Impacts in Comparison to the Approved Plan PEIR:** The approved Plan PEIR identified a significant and unavoidable impact related to exceeding noise standards (NOI-1) because even with the incorporation of mitigation measures **NOI-1a (Implement Construction Noise Reduction Measures for Development Projects and Transportation Network Improvements)**, **NOI-1b (Implement Operational Noise Reduction Measures for Transportation Network Improvements)**, and **NOI-1c (Implement Operational Noise Reduction Measures for Development Projects)**, it could not be guaranteed that all future project-level impacts would be mitigated to a less-than-significant level. As discussed above, no new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result due to the proposed Amendment. Mitigation measures **NOI-1a**, **NOI-1b**, and **NOI-1c** identified in the approved Plan PEIR would remain applicable to the proposed Amendment. Therefore, the conclusion for the proposed Amendment during all horizon years (2025, 2035, 2050) would be unchanged from what was identified in the approved Plan PEIR, and would remain significant and unavoidable.

## Exacerbation of Climate Change Effects

Consistent with the analysis and findings of the approved Plan PEIR, the proposed Amendment would not exacerbate climate change effects on generation of a substantial temporary or permanent increase in ambient noise levels.

### **NOI-2 GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS**

#### **ANALYSIS METHODOLOGY**

This section discusses the construction and operational vibration impacts of forecasted regional growth and land use change, and planned transportation network improvements outlined in the approved Plan PEIR in comparison to the approved Plan as amended by the proposed Amendment. Impacts discussed in this section are based on applicable standards and guidelines.

The approved Plan PEIR did not provide detailed quantitative analyses of potential impacts given the high-level (programmatic) nature of the approved Plan and the lack of specific project details. Consistent with the analysis in the approved Plan PEIR, the analysis of this proposed Amendment is qualitative.

#### **IMPACT ANALYSIS**

##### **2025, 2035, and 2050**

The proposed Amendment would not change land use or anticipated growth within the region or introduce new transportation network or facility improvements from what was analyzed in the approved Plan PEIR. Mitigation measures **NOI-2a (Implement Construction Groundborne Vibration and Noise Reduction Measures)** and **NOI-2b (Implement Groundborne Vibration and Noise-Reducing Measures for Rail Operations)** would continue to be applicable to the proposed Amendment. Because no new construction or changes to rail operations are anticipated, construction and rail operations impacts of land use, anticipated growth, and transportation network improvements as they relate to groundborne vibration and groundborne noise would remain unchanged from the approved Plan PEIR.

The proposed Amendment would remove the regional road usage charge, which would result in a minor increase in traffic volume. However, as previously discussed in Section 4.13 of the approved Plan PEIR, vehicles accessing the highway or local road system would not produce significant vibration at distances of more than 25 feet. Therefore, the removal of the regional road usage charge would not result in new or substantially more severe significant vibration impacts at nearby receptors.

#### **Conclusion**

**No New or Substantially More Severe Significant Impacts in Comparison to the Approved Plan PEIR:** The approved Plan PEIR identified a significant and unavoidable impact related to exceeding groundborne vibration criteria (NOI-2) because even with the incorporation of mitigation measures **NOI-2a (Implement Construction Groundborne Vibration and Noise Reduction Measures)** and **NOI-2b (Implement Groundborne Vibration and Noise-Reducing Measures for Rail Operations)**, it could not be guaranteed that all future project-level impacts would be mitigated to a less-than-significant level. As discussed above, no new significant environmental effects or a substantial increase in the severity of previously identified

significant effects would result due to the proposed Amendment. Mitigation measures **NOI-2a** and **NOI-2b** would continue to be applicable to the proposed Amendment. Therefore, the conclusion for the proposed Amendment during all horizon years (2025, 2035, 2050) would be unchanged from what was identified in the approved Plan PEIR and would remain significant and unavoidable.

#### **Exacerbation of Climate Change Effects**

Consistent with the analysis and findings of the approved Plan PEIR, the proposed Amendment would not exacerbate climate change effects on generation of excessive groundborne vibration or noise levels.