3.11 NOISE

NOISE – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☐	☒
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within 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, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.11.1 Environmental Setting

The Project site is located on the southeast side of the Carquinez Strait in a relatively isolated and undeveloped area near the town of Port Costa surrounded by the Carquinez Shoreline Regional Park, agricultural lands, and a small section of industrial lands that was acquired by the EBRPD to become park lands. Adjacent to the Project area is a UPRR right-of-way with two rail lines. A hillside along the rail lines provides a geographical buffer between the wharf and the commercial and residential areas of Port Costa, which are approximately 0.6 mile northwest of the Project site.

According to the Contra Costa County General Plan (Contra Costa County 2005), the noise standard applicable in the Project vicinity, or other areas where the primary noise source is train passbys, is approximately 70 A-weighted decibels (dBA). The UPRR line runs adjacent to the Project area, and rail cars and locomotives have noise levels of 80

to 88 dBA at 50 feet, with their horns as loud as 110 dBA at 50 feet (Federal Transit Administration 2006). However, these noise levels are not constant, as trains pass by only intermittently.

Sensitive Receptors

Sensitive noise receptors are, in general, those areas of human habitation or substantial use where the intrusion of noise has the potential to adversely impact the occupancy, use, or enjoyment of the environment. These can include residences, schools, hospitals, parks, and places of business requiring low levels of noise.

The primary human response to environmental noise is annoyance, although other responses include: interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. The degree of annoyance has been found to correlate well with the day-night average sound level (L_{dn}). A comparison of L_{dn} with the percentage of the exposed population that is "highly annoyed" and with the estimated population exposed to L_{dn} levels greater than 65 decibels provides an estimate of the number of persons "highly annoyed" by aircraft or similar noise. These levels of annoyance are based on long-term exposure. Annoyance for short-term activities, such as construction noise and or new flight patterns, could be influenced by other factors such as land use and attitude toward the activity creating the noise.

The Project site is 0.6 mile southeast from residences and businesses in Port Costa, the closest area with sensitive receptors. Port Costa has a population of 190 people.

3.11.2 Regulatory Setting

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Tables 1-2 and 3.11-1. Local goals, policies, and/or regulations applicable to this issue area are listed below.

Table 3.11-1. Federal and/or State Laws, Regulations, and Policies Potentially Applicable to the Project (Noise)

U.S.	• The Noise Control Act (42 USC 4910) required the USEPA to establish noise emission criteria, as well as noise testing methods (40 CFR Chapter 1, Subpart Q). These criteria generally apply to interstate rail carriers and to some types of construction and transportation equipment. The USEPA published a guideline (USEPA 1974) containing recommendations for acceptable noise level limits affecting residential land use of 55 dBA L_{dn} for outdoors and 45 dBA L_{dn} for indoors. • The Department of Housing and Urban Development Environmental Standards (24 CFR Part 51) set forth the following exterior noise standards for new home construction (for interior noise levels, a goal of 45 dBA is set forth and attenuation requirements are geared to achieve that goal): ○ 65 L_{dn} or less – Acceptable ○ 65 L_{dn} and < 75 L_{dn} – Normally unacceptable, appropriate sound attenuation measures

Table 3.11-1. Federal and/or State Laws, Regulations, and Policies Potentially Applicable to the Project (Noise)

	must be provided ○ > 75 L_{dn} – Unacceptable • Federal Highway Administration Noise Abatement Procedures (23 CFR Part 772) are procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. It establishes five categories of noise sensitive receptors and prescribes the use of the Hourly L_{eq} as the criterion metric for evaluating traffic noise impacts. • NTIS 550\9-74-004, 1974 ("Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety"). In response to a Federal mandate, the USEPA provided guidance in this document, commonly referenced as the, "Levels Document," that establishes an L_{dn} of 55 dBA as the requisite level, with an adequate margin of safety, for areas of outdoor uses including residences and recreation areas. The USEPA recommendations contain a factor of safety and do not consider technical or economic feasibility (i.e., the document identifies safe levels of environmental noise exposure without consideration for achieving these levels or other potentially relevant considerations), and therefore should not be construed as standards or regulations.
CA	State regulations for limiting population exposure to physically and/or psychologically significant noise levels include established guidelines and ordinances for roadway and aviation noise under California Department of Transportation as well as the now defunct California Office of Noise Control. The California Office of Noise Control land use compatibility guidelines provided the following: • An exterior noise level of 60 to 65 dBA Community Noise Equivalent Level (CNEL) is considered "normally acceptable" for residences. • A noise level of 70 dBA CNEL is considered to be "conditionally acceptable" (i.e., the upper limit of "normally acceptable" noise levels for sensitive uses such as schools, libraries, hospitals, nursing homes, churches, parks, offices, and commercial/professional businesses). • A noise level of greater than 75 dBA CNEL is considered "clearly unacceptable" for residences.

Contra Costa County. Contra Costa County does not have a noise ordinance. However, the following goals and policies from the Contra Costa County General Plan may be applicable to the Project (Contra Costa County 2005):

- Goal 11-B - To maintain appropriate noise conditions in all areas of the County.
- Goal 11-E - To recognize citizen concerns regarding excessive noise levels, and to utilize measures through which the concerns can be identified and mitigated.
- Policy 11-8 - Construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods.

3.11.3 Impact Analysis

a) Result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

No Impact. The Project would not expose persons to, or generate, noise levels in excess of standards established in the Contra Costa County General Plan. The County requires that construction activities be concentrated during daytime hours on weekdays so that evening and early morning periods are relatively quiet. Phillips 66 would conform to this policy. Additionally, the Project area is approximately 0.6 mile southeast from the nearest area with sensitive receptors (Port Costa). The hillside adjacent to the rail lines provide a geographical buffer for noise levels, which attenuate over that distance. There would be no impact related to noise exposure or generation resulting from the Project.

b) Result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?

No Impact. Heavy equipment to be used for deconstruction activities may generate perceptible vibration in the immediate vicinity of an active deconstruction site. However, the Project site is approximately 0.6 mile southeast from the nearest area with sensitive receptors (Port Costa), and vibration or groundborne noise levels would not be much different than those caused by the active rail lines adjacent to the Project site. Therefore, the Project would have no impact on vibration or groundborne noise levels. No vibration impacts or residential annoyance would result from the Project.

c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. The Project would not permanently increase ambient noise levels in the Project vicinity. Deconstruction activities would be temporary, and once the Project is complete no noise would be generated in the area other than that from the rail lines.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project that would result in a substantial nuisance to nearby sensitive receptors?

Less than Significant Impact. Although the Project may result in a substantial temporary increase in ambient noise levels in the Project area, levels would not likely exceed existing levels generated on the adjacent rail lines by rail cars and locomotives (80 to 88 dBA) and locomotive horns (110 dBA at 50 feet) (FTA 2006).

Deconstruction activities would require a variety of equipment including cranes, excavators, drills, etc. During the up to 5-month duration of the Project, noise levels

generated by equipment operation would vary depending on which structures are being removed and which pieces of equipment are needed to remove them. Table 3.11-2 lists some of the various deconstruction equipment types that would likely be used and their noise levels at a distance of 50 feet from the source.

Table 3.11-2. Maximum Noise Levels of Proposed Deconstruction Equipment

Deconstruction Equipment	Noise Levels (dBA) at 50 feet
Crane	81
Derrick Crane	88
Excavator with Shear	81
Concrete Drill	99
Portable Electrical Generator	73
Diamond Wire Saw	90
Loader	85
Compactor	82
Dump Truck	76

Source: FHWA 2011

Because the nearest sensitive receptors are at least 0.6 mile from the Project site, the adjacent hillside provides a natural barrier that would partially block the noise, and deconstruction activities would be limited to the least noise sensitive times (weekdays between 8:00 am and 5:00 pm); therefore, noise generated from deconstruction activities would have a less than significant impact on nearby sensitive receptors.

e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?

f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project area is not located within the vicinity of a public or private airstrip and would not expose people to excessive airport noise. No impact would occur.

3.11.4 Mitigation Summary

The Project would not result in significant noise impacts; therefore, no mitigation is required.