SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT
2150 Webster Street, Oakland, CA 94612

NOTICE OF CEQA EXEMPTION

Project Name:	K-Line Interlocking Replacement Project
Project Address:	Not Applicable
County:	Alameda
BART Project No.:	15CQ008
Project Sponsor:	BART Strategic Engineering, Maintenance and Engineering
Project Contact:	Errol Douglas Errol.douglas@bart.gov

Date of CE Determination: March 21, 2023

This CE will be filed internally **[ ]**
This CE will be filed with the County Clerk **[X]**
This CE will be filed with the State Clearinghouse **[X]**

PROPOSED PROJECT

Project Location

The K-Line[1] Interlocking Replacement Project (Project) is proposed at two locations along approximately a 3.5-mile-long section of the BART railway within a portion of State right-of-way (ROW) jointly occupied by BART and operated under a Joint Use and Maintenance Agreement with Caltrans in the Interstate 980 (I-980) and State Route 24 (SR 24) medians in Oakland, California. The first location is between Sycamore Street and MacArthur Boulevard, and the second location is in the vicinity of Broadway and Golden Gate Avenue. (See Attachment 1, Project Location Map.) The proposed Project footprint is illustrated in Attachment 2 (K-Line Interlocking Track Replacement Project – Project Footprint).

Project Background

In November 2016, voters passed Measure RR, which authorized BART to issue bonds for $3.5 billion to rebuild the aging BART system to make it safer and more reliable. Under Measure RR,

[1] K-Line is the reference designator for the Oakland Line per the BART Facilities Naming Convention (as stated in the BART Facilities Standard). Reference designators are assigned to designate BART wayside facilities, equipment, and devices. K-line runs from just north of the MacArthur Station to the Oakland Wye, an underground junction in downtown Oakland underneath Broadway and 9th Streets.

BART is renewing the basic infrastructure that comprises the core of the BART system, including tracks, power infrastructure, tunnels, and mechanical infrastructure. BART has implemented a package of projects that will allow it to meet service demands, continue to support the region's growing economy, and get more cars off the road. The objectives of the projects being undertaken include the following goals:

- Rebuild major interlockings[2]
- Replace 90 miles of rails
- Replace original power distribution infrastructure
- Replace major train control system infrastructure
- Expand maintenance facilities to store and service a larger fleet of rail cars

BART is the lead agency for environmental review under the California Environmental Quality Act (CEQA). The project is requesting use of property owned by the California Department of Transportation (Caltrans) as described below, and Caltrans is the lead agency under the National Environmental Policy Act (NEPA).

Project Description

The Project will remove BART's K-Line existing interlockings K23 and K25 between 27th Street and MacArthur Boulevard, and C15 between Presley Way and Chabot Road, and replace them with new components per current BART Facilities Standards.[3] The horizontal and vertical track geometry will match the existing track. A total of 20 turnouts[4] will be replaced during the Project. The scope of the mainline and interlocking replacement includes components of the track structure, including running rails, guard rails, switch points, frogs, plates, ties, and top layer of ballast. The limits of track replacement include the interlocking special trackwork and the mainline track replacement between interlockings. Where track is on an aerial structure, only the existing rail will be replaced across the structure. The existing direct fixation track fastening system will remain in place. The project will also replace existing signal and fiber optic wireways, conduits and cables and contact rail within the track replacement limits.

The K-Line Replacement Project is a construction maintenance project, and other than the special 24-hour round-the-clock weekend work periods when local BART train activity will be suspended to allow for replacement of the crossovers on the BART mainline, there will be no effect on, or change to, BART operations.

[2] An interlocking is a section of track and associated signal components that allows trains to safely move between lines.

[3] BART Facilities Standards provide guidance and minimum standards for BART facilities and practices and for safeguarding patrons, the general public, and employees, as well as safeguarding property and on-going operations. The Standards regulate and control the design, construction, quality of materials, equipment and installation of facilities within the jurisdiction of the BART system.

[4] A turnout is a track configuration that enables trains to move from one track to another.

Construction Activities

Most construction activities will be completed within the BART ROW. These include:

- Temporary barriers and safety measures
- Demolition
- Earthwork and grading
- Track and special trackwork installation
- Traction power and train control replacement, including new underground ductbanks[5]
- Hauling and removing of material from work site.
- Equipment to be used will include, but not be limited to:
    - Maintenance Vehicle Consist (MVC) train. Includes locomotives and flatcars with equipment including, but not limited to, cement mixers and lifting devices.
    - Hi-rail trucks and maintenance equipment
    - Rail saw
    - Impact wrench
    - Ballast tamping machine
- Temporary noise abatement measures as necessary to comply with BART Facilities Standards Specifications and Contract documents will be implemented.

The interlocking replacement construction activities (including track, special trackwork, traction power and train control replacement) will be conducted from within BART right-of-way. Project employees and materials will be transported to specific site locations via BART trackway from temporary staging areas close to the BART trackway. Entry to the trackway will be from BART maintenance-of-way access points. Materials will be brought to site via hi-rail equipment and installed during special 24-hour round-the-clock weekend work periods when local BART activity will be suspended to allow for replacement of the crossovers on the BART mainline. The project is scheduled to begin in 2023 and be completed in 2025.

BART Staging Areas

Staging Area A: Sycamore Street at Northgate Avenue. A vacant construction staging area underneath the highway overcrossing and within Caltrans right-of-way, the site is currently unused and was formerly used as a parking lot. Construction work utilizing this area is anticipated between the summer 2023 through the end of 2025. BART anticipates that all work will take place during daytime hours.

Work to be completed in the proposed Sycamore laydown area includes:

- Vegetation removal, including clearing and grubbing and tree trimming will be required prior to material laydown.
- Staging of contractor construction equipment and materials, including but not limited to the following: ballast; track and other materials including rail, concrete ties, switch machines, precast ductbank sections, fiberglass raceways; demolished material;

[5] Ductbank, an assembly of buried conduit, support hardware, reinforcing material and ground conductor, provides a pathway for electrical or telecommunications cabling.

construction trailer; backhoe, skidsteer, front-end loader, cement mixer, dump trucks, truck/trailers, generators, and light-plants.[6]

- Measures to reduce light and glare during construction include focusing illumination downward to restrict light from extending beyond the construction boundaries. Light fixtures will be fitted with lenses, hoods, and reflectors to minimize spillover light and glare.
- Temporary noise barriers and equipment shields, such as noise blankets, will be installed as needed to reduce noise from staging area activities.

550 West Grand Avenue. The existing parking lot (within BART right-of-way) at 550 West Grand is currently being leased to the U.S. Postal Service (USPS) for employee parking. The lease will expire prior to K-Line Interlocking construction and will not be renewed, so that BART can use it for employee parking during the Project construction. Vehicles will be allowed to enter and exit the existing parking lot 24 hours a day, 7 days per week.

40th and Martin Luther King Way. The existing vacant lot (within BART right-of-way) at the southeast corner of 40th and Martin Luther King Jr Way (MLK Jr Way) will be utilized by the project to store spoils removed from the BART trackway during weekend shutdowns in 2024 and 2025. Dump trucks will exit the trackway at BART's Maintenance of Way 07 on MacArthur Boulevard then make their way to the 40th and MLK property to off load the spoils. Spoils will be hauled off at a later date. All work will take place during daytime hours. Equipment that will be used to perform work at this site include front-end loader, dump trucks, and truck/trailers. Temporary noise barriers, such as noise blankets, will be installed as needed to reduce noise from staging area activities.

Patton Street. Beginning in April 2023, BART would use a temporary staging area underneath State Route 24 (SR 24) within Caltrans right-of-way for a BART employee in charge (EIC) trailer. This area is located approximately 0.1-mile north of the intersection of Patton Street/Broadway/Keith Avenue along the west side of Patton Street within the City of Oakland. This portion of Caltrans ROW is currently unused and is devoid of vegetative cover.

The EIC trailer would be used for construction briefings. It would be approximately 20 feet long by 10 feet wide and would be installed in a bare area under the highway. Temporary, portable restroom facilities would be provided at this location for construction staff, as well. The EIC trailer would be powered by a generator (Honda EU1000i, four stroke with noise rating less than 42 dB). Lighting would be used for staff safety and security. To reduce light and glare, all illumination would be focused downward to minimize light spillover and intrusion onto neighboring properties. The trailer would be temporarily in place during each of the proposed five shutdown weekends. Staff would be active at this location between Saturday 12:30 am and Monday 4:00 am.

[6] A light-plant is a portable light tower used to illuminate the work zone during nighttime operations.

Construction staff would park at BART's Maintenance Way 09 (MW 09) located approximately 0.35 mile to the northeast of the site or BART's Rockridge Station, approximately 0.5 mile to the southwest. From there, staff would travel to the EIC trailer at the Patton staging area. A set of nearby stairs in the median of SR 24 would then be used by construction staff to access the BART trackway and the work area.

No sidewalk closures would occur during operation. Sidewalks would be briefly blocked when the trailer is installed/removed, which would occur at the beginning/end of each weekend shutdown period. Construction staff would be instructed to keep the sidewalk unobstructed during project operations.

BART Maintenance-of-Way Access Points

BART will utilize two of their existing maintenance-of-way entry points to access the construction site. These access points allow for hi-rail vehicle access to the trackway that is required to complete construction.

Maintenance of Way 07 (MW07). Located along MacArthur Boulevard under SR 24 at PM ALA 2.0 between Martin Luther King Jr. Way and Telegraph Avenue, this access point will be utilized by BART Maintenance hi-rail vehicles on a nightly basis during BART non-revenue hours, 1 AM to 5 AM, in 2023 and during the 17 BART weekend closures during 2024 and 2025. Also, during the weekend closures BART anticipates implementing a road closure along eastbound MacArthur Boulevard between MLK Jr Way and Dover Street to allow for unrestricted access to MW07.

Construction activities to be completed at MW07 include:

- Site access for workers and smaller tools and equipment
- Hauling and removing of material from work site. Equipment to be used will include, but not be limited to: hi-rail trucks, pickup trucks, backhoe, skidsteer, front-end loader, cement mixer, dump trucks, truck/trailers, generators, and light-plants.
- Material to be staged at MacArthur Boulevard and moved into/out of the site, will include, but not be limited to: concrete ties, ballast, subballast, and subgrade material.
- Conduits and wireways
- Switch machines and junction boxes

Maintenance of Way 09 (MW09). Located along Chabot Road approximately 420 feet west of 7040 Chabot Road, this access point will be utilized by BART to enter the right-of-way during five BART weekend shutdowns in 2023 between April and June.

Construction activities to be completed at MW09 include:

- Clearing and grubbing
- Minor grading. Suitable materials will be reused onsite and there will be no net increase of soil.
- Site access for workers and equipment
- Storage and laydown of special trackwork materials including rail, concrete ties, and switch machines

- Hauling and removing of material from work site. Equipment to be used will include, but not be limited to: hi-rail trucks, pickup trucks, flatbed trucks/trailers, backhoe, skidsteer, front-end loader, cement mixer, dump trucks, truck/trailers, generators, and light-plants.

Permits and Agency Coordination

BART is requesting the use of the Caltrans' site at Sycamore Street and Northgate Avenue (Staging Area A) for a construction staging area. Caltrans will need to approve the use and any related permits. The approval process will also require an environmental review for use of the property under the NEPA. Caltrans would be the lead agency for the NEPA review. A Categorical Exclusion is anticipated.

ENVIRONMENTAL EVALUATION

The project is maintenance work to ensure the long-term safety and operability of BART's system infrastructure. With the exception of short-term interruption of BART service to allow construction during selected weekends, no change to BART operations or service would take place. No expansion of existing use would occur. With the exception of staging areas, the construction would take place within the portion of State right-of-way jointly occupied by BART and operated under a Joint Use and Maintenance Agreement with Caltrans.

The most likely Project impacts would be related to construction activity. Construction impacts to adjacent communities were analyzed for the most likely potential areas of impact, specifically air quality, biological resources, noise, and community impacts. Background reports were produced evaluating potential impacts for those topics. The Patton Street staging area was added to the K-line Project late in the environmental review process, and a supplemental review of potential environmental impacts at the Patton Street site is included as Attachment 3 (*Supplemental Information for the Patton Staging Area-Assessment of Potential Impacts,* HNTB, March 15, 2023). See that document for an analysis of the Patton Street site. Evaluation of the proposed Project did not identify any significant project impacts. The results of the environmental evaluation are summarized below. A full list of BART's commitments to avoid and minimize potential impacts for all elements of the Project is presented in Attachment 4.

Air Quality

A memorandum (HNTB, *BART K-Line Replacement Project-Air Quality Analysis*, March 7, 2023) presents the results of a construction-related particulate matter (PM) emissions analysis associated with the K-Line Project. The Project is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). BAAQMD is the primary agency responsible for

assuring that the air quality standards are met in the San Francisco Bay Area, which consists of National and California Ambient Air Quality Standards (NAAQS and CAAQS, respectively). This analysis includes $PM_{2.5}$ and PM_{10}, as described below:

- $PM_{2.5}$ is fine, inhalable particles with diameters that are generally 2.5 micrometers and smaller. This is the most harmful air pollutant to the health of Bay Area residents. Short- or long-term exposure to $PM_{2.5}$ can cause a wide range of respiratory and cardiovascular health effects, including strokes, heart attacks, and premature deaths. The project location (Alameda County) is shown as non-attainment for $PM_{2.5}$[7] per the USEPA's Green Book.
- PM_{10} is inhalable particles with diameters 10 micrometers and smaller. These particles can get deep into human lungs and some even may get into the bloodstream. Particles deposited within the lungs can induce tissue damage and lung inflammation. According to USEPA's Green Book, the project location (Alameda County) is in attainment for PM_{10}.

PM emissions from construction of the Project were calculated using the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model (RCEM) (version 9.0.0, April 2018). This is the BAAQMD's recommended software to analyze construction emissions for transportation projects. Construction PM emissions for the Project were estimated for four major construction components: material hauling, operation of off-road construction equipment, worker commutes, and earth disturbing work (the source of fugitive dust). Total exhaust emissions were calculated excluding the fugitive dust since the BAAQMD standard is for exhaust emission only.

The Project would use Tier 4 construction equipment. USEPA implemented Tier 4 as its engine emissions standard for new heavy equipment diesel engines. The standard was established in 2004, and it was phased in from 2008 to 2015. The USEPA's goal with the new emission standard was to significantly reduce NO_x and PM emissions. Since the Project would use Tier 4 construction equipment, it would comply with USEPA emission standards and have lower PM emissions than non- Tier 4 equipment.

PM Emissions

The analysis calculated total construction emissions and average emissions per day. Total construction-related PM_{10} and $PM_{2.5}$ emissions for the project would be 612 and 494 pounds, respectively. The average daily PM_{10} and $PM_{2.5}$ emissions for both construction areas (Sycamore Street-MacArthur Boulevard and Broadway-Golden Gate Avenue) are 1.5 pounds per day and 1.3 pounds per day respectively. These emissions, as well as their combined totals, are well below the BAAQMD threshold of 82 pounds per day (PM_{10}) and 54 pounds per day ($PM_{2.5}$). The total PM emissions reflect a worst-case scenario assuming both sites are under construction at the same time. The Broadway/Golden Gate Avenue site will be under operation for a shorter period of the total construction period. Therefore, construction PM emissions are not expected to have significant impacts to residents in the project area.

[7] USEPA Green Book, *https://www3.epa.gov/airquality/greenbook/anayo_ca.html*, accessed on January 5, 2023

According to the USEPA, the project area is in attainment for PM_{10} but is in non-attainment for $PM_{2.5}$. The daily $PM_{2.5}$ emissions from the Project are minor compared to the standard project threshold. Based on this comparison, construction-related $PM_{2.5}$ emissions associated with the Project were considered less than significant. Even though there will be PM emissions associated with construction, the Project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. The Project does not conflict with or obstruct implementation of the 2017 Clean Air Plan since its daily PM emissions will be well below the BAAQMD standard. The Project will not have any impact on BART operations or alternate mode of transportation; thus, it will not have any change in operational PM emissions.

There may be some sensitive receptors (residents) in the project area along Sycamore Street and MacArthur Boulevard. Since the daily PM emissions from the Project are less than the BAAQMD standard, any impacts to sensitive receptors would be less than significant. Operation of equipment during construction may result in some diesel exhaust odors throughout the construction site. The project is located in an urban area with residential and commercial uses, and work will occur during weekend periods when residents are more likely to be home. However, these odors would be intermittent and only while operating construction equipment. Based on this information, a less-than-significant impact is expected from odors generated by construction.

Fugitive Dust

Fugitive dust is a possibility during construction. To minimize fugitive dust emissions during construction, the Project would implement the following measures:

- All vehicle speeds on unpaved roads would be limited to 15 miles per hour (mph).
- Stabilization of disturbed areas would be done as soon as possible (including paving and vegetation establishment).
- When average wind speeds exceed 20 mph, excavation, grading, and/or demolition activities would be avoided, where feasible, to minimize airborne dust.
- Equipment and materials storage sites would be located as far away from residential and park uses as practicable. Construction areas would be kept clean and orderly.
- Construction activities (such as excavation, grading, and ground-disturbing) would be phased to reduce the number of disturbed surfaces at any one time to the extent feasible.
- A publicly visible sign would be posted with the Project's Hotline number for the community to contact BART regarding dust complaints. The BAAQMD phone number would also be visible to ensure compliance with applicable regulations.

Greenhouse Gas Emissions

GHG emissions are anticipated as a result of Project construction. No emission analysis was performed. However, the project would minimize its GHG emissions during construction by incorporating the following measures:

- Regular maintenance of vehicles and equipment
- Limit idling of vehicles and equipment onsite
- If practicable, recycle nonhazardous waste and excess material. If recycling is not practicable, dispose of material
- Use solar and electricity as power sources, if feasible

Air Quality Conclusion

As documented in the air quality analysis, the emissions from the Project are well below the BAAQMD standard PM emission threshold. The Project does not have any significant impact for any of the CEQA criteria or require mitigation. Based on the results of this analysis, the construction-related PM emissions are not expected to have any significant impact on air quality.

Biological Resources

A memorandum (HNTB, *Assessment of Biological Resources and Impacts*, March 9, 2023) was prepared to address biological resources and permitting requirements for the Proposed Project. The Project footprint is defined as the area of direct impacts (Attachment 2, Proposed Project Footprint). No direct impacts would occur outside of the Project area. The Biological Study Area (BSA) considers the area 100 feet from the Project footprint to account for any indirect impacts.

Special Status Species

The potential for special-status wildlife and plant species to occur in the BSA was considered based on habitat assessments during site visits and querying the following databases:

- U.S. Fish and Wildlife (USFWS) Information for Planning and Consultation (IPAC, USFWS 2022)
- National Marine Fisheries Service (NMFS) California Species List Tools (NMFS 2016)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB, CDFW 2022)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, Rare Plant Program 2022)

Site visits were conducted at the three proposed staging areas and two maintenance-of-way access points: 550 W. Grand Avenue, 40th and MLK Jr. Way, Staging Area A (Sycamore Street at Northgate Avenue), MacArthur Boulevard adjacent to MW07, and MW09. BART tracks and I-980 were not surveyed as these areas generally do not support biological resources. The BSA is in a heavily urbanized setting subject to high levels of human disturbance. There is no riparian habitat or other sensitive natural communities in or near the BSA. Vegetation is dominated by non-native species, both ornamental as part of landscaping, as well as ruderal (weedy) species.

The database queries returned lists including 21 federally endangered, threatened, or candidate species (14 animals and seven plants) and 15 state endangered or threatened species (nine animals and five plants). Suitable habitats for these species are not present in the BSA with the exception of monarch butterflies (*Danaus plexippus*), which are a federal candidate species. The BSA is not within or adjacent to any critical habitat.

Monarch Butterfly. Monarch larvae are specialists on milkweed plants (*Asclepias spp*.). No milkweed plants were observed during site visits; therefore, monarchs would not be able to breed within the Action Area. No known overwintering roosts occur within the Action Area.[8] Adult monarch butterflies (*Danaus plexippus*) are floral generalists and feed on nectar from a wide range of plant species. Monarchs forage within urban areas in Oakland, including in residential areas, landscaping, and roadsides, and could forage at 550 W. Grand Avenue, 40th and Martin Luther King Jr. Way, Staging Area A, and MW09. However, the proposed Action would not affect foraging monarchs. Although clearing and grubbing would be required by the Project, it would not affect the overall availability of floral resources. The Project would not result in the loss of substantial, high quality foraging habitat and would not result in the loss of any adult monarchs. The Project would have no effect on monarch butterflies.

The CNDDB and CNPS database search results included eight state Fully Protected species and 21 state Species of Special Concern. Suitable habitat for these species does not occur in the BSA, with the exception of bats.

Bat Species. Two bat Species of Special Concern have the potential to roost within the Action Area, pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*). Other bats could also roost within the BSA. Bats are protected in California. Both hoary and Townsend's big-eared bats have low potential for occurrence due to the relatively small area of suitable habitat, low quality of the habitat due to the high level of human disturbance, lack of recent nearby occurrences, regional rarity, and proximity to higher quality habitat.

Rare Plants

No rare plants were observed during the site visits. Although MW09 is within range and habitat tolerance of some rare plants, it is unlikely that MW09 could support any special-status plants due to the level of disturbance, dense gravel and shrub cover, and predominance of non-native herbaceous and shrubby species. However, if a special-status plant species is discovered during implementation of the proposed Project, consultation with the appropriate agencies would be initiated.

Jurisdictional Waters

No documented waters or wetlands were identified in the USFWS National Wetlands Inventory database within or near the BSA. No waters or wetlands were observed during site visits. No

[8] Western Association of Fish and Wildlife Agencies. 2020. Western Monarch Overwinter Sites (GIS Layer). Accessed April 14, 2020.

riparian or sensitive natural communities were identified within or near the BSA, either through site visits or database searches.

The Project will implement standard stormwater pollution control measures as required by Section 402 of the Clean Water Act, including preparation of a Stormwater Pollution Prevention Plan (SWPPP), which would protect off-site aquatic resources receiving water from the storm drain inlets in and near the Action Area.

Avoidance and Minimization Measures
The following measures are included in the proposed Project to avoid and minimize impacts to sensitive resources (See *Assessment of Biological Resources and Impacts* for full text of each Avoidance and Minimization Measure):

AMM-1 Worker Environmental Awareness Training: A pre-construction meeting for construction personnel will be held, during which the environmental requirements will be explained.
AMM-2 Protection of Migratory Birds: Preconstruction nesting surveys.
AMM-3 Roosting Bats: Preconstruction survey looking for evidence of roosting bats.
AMM-4 Construction Lighting: Minimize light pollution from construction, including night work.
AMM-5 Water Quality: SWPPP prepared and implemented during construction, if applicable.
AMM-6 Weed Control: Control the spread of noxious weeds disturbed during construction.

With the incorporation of the avoidance and minimization measures, there would have no impact on biological resources. The Project would not have a substantial adverse effect on any species identified as a candidate, sensitive or special status species and would not result in a take of species. The proposed Project would have no effect on bird species covered under MBTA because preconstruction nesting bird surveys will be conducted during the breeding season. The Project also would have no effect on bat species with the implementation of roost avoidance measures.

Biological Conclusion
The Project would not have a substantial adverse effect on any riparian habitat, wetlands, or other sensitive natural community. The BSA does not include any migratory corridors, movement corridors, or nursery sites used by fish or wildlife. Therefore, the Project would not interfere with the movement of any fish or wildlife species or use of nursery sites. The Project would not conflict with any local policies, ordinances, or conservation plans.

Noise

A noise assessment for the K-Line project (Wilson Irhig, *Construction Noise Study, BART K-Line Interlocking Replacement Project*, January 5, 2023) was prepared based on the Federal Transit Administration (FTA) methodology and utilizes FTA construction noise standards.

FTA Noise Standards

Operational noise following project construction will not change as the number and frequency of BART trains will not be affected by the project; however, construction noise could be an issue with the surrounding community. The construction noise from this project was assessed using criteria presented in the FTA *Transit Noise and Vibration Impact Assessment Manual* because the Project is a transit project, and BART is the designated lead agency under CEQA.

FTA provides guidance regarding the evaluation of noise and vibration impacts associated with transit projects in *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018). The *Manual* includes prediction methods, assessment procedures, and impact criteria for noise and vibration from all aspects of transit projects, including construction. The FTA assessment criteria account for the existing noise environment, the duration of construction, and the adjacent land use. The FTA Detailed Analysis method for quantitative construction noise analysis, which was employed for the K-Line Project), considered all equipment on the project site, typical usage of that equipment, the distance between the work and the noise-sensitive receptor, any existing shielding, and any noise abatement means and methods employed.

BART Facilities Standards

The BART Facilities Standards (BFS) provide guidance and minimum standards for the District's facilities and practices and for safeguarding patrons, the general public and employees, as well safeguarding property and on-going operations. The BFS includes Section 01 57 00, Temporary Controls (R3.1.2), which establishes standards to minimize construction noise produced by BART construction work. The BFS establishes procedures for monitoring noise, measuring noise, and identifies maximum allowable noise levels according to the affected land use (residential, commercial, or industrial). Although use of the BFS is at the discretion of BART project managers, BART's typical practice is to incorporate the BFS into contract documents as a requirement of the project.

The BFS guidelines are uniformly more restrictive than the FTA construction noise standards. Therefore, any means or method utilized to achieve compliance with the FTA standards would be necessary, but not necessarily sufficient, to meet the BFS noise guidelines. Because they would be necessary to meet the BFS guidelines, those means and methods were considered integral to the project description in the analysis.

BART's typical noise abatement means and methods include limiting some noisy activities to certain times of the day, locating work and equipment far from noise-sensitive receptors, using quieter-than-normal equipment (e.g., "quiet" generators[9]), placing noise shields around noisy tools and operations, and constructing temporary sound barrier walls around larger work sites. In many cases, a combination of these is used at a particular job site.

[9] "Quiet" equipment is a marketing designation that some equipment manufacturers use to denote that noise levels are less than comparably-sized equipment. While it is the case that some equipment is quieter, any manufacturer claim should be substantiated by noise measurement data.

Noise Impact Analysis

Baseline noise measurements were conducted to document existing baseline conditions. There are no noise-sensitive receptors located within the Project footprint, but there are in the project vicinity. The closest noise-sensitive receptors (residences) are approximately 180 feet from the track ROW and 20 feet from one of the staging areas.

The work would take place under various operational conditions, including during BART revenue hours, non-revenue ("blanket") hours, weekend shutdowns, and modified revenue hours.

The noise analysis presented a summary of the Project work that will occur at each of the work sites, equipment expected at each location, and distances from the work sites to the nearby receptors. Preliminary calculations[10] of noise levels were made for receptors at various locations. The preliminary calculations indicated a few areas where Project construction work will satisfy the FTA criteria taking only typical BART abatement measures into account. Abatement means and methods that BART routinely employs to meet its own Facility Standards (BFS) will more than suffice to satisfy the FTA standards. The Noise Study (Table 6) identified the activities and locations that will need abatement, the degree of noise abatement required, and potential means and methods of abatement. Construction noise related to work at interlocking C15, interlocking K25, and Staging Area A at Sycamore Street would need abatement. The Noise Study (Table 7) summarized Project noise levels at the noise-sensitive receptors closest to the project. As illustrated in the report, the Project noise levels at all the receptors – taking into account minimum noise reduction provided by routine BART abatement means and methods – is at or below the FTA criteria.

Portable equipment shielding and temporary noise barriers will be used to reduce construction noise. The site-specific details of the means and methods of abatement are not all known at this stage of the analysis, but the actual abatement methods will be shown in the final Project construction documents. In addition, two measures were added for the Patton Street site.

Avoidance and Minimization Measures

The following additional project measures are recommended for the Patton Street staging area to avoid potential noise impacts:

- If a complaint is received about the truck backup alarm, the EIC trailer and restrooms would be placed using a flag-person to spot them while being positioned.
- The generator used to power the EIC trailer would be placed on the opposite side of the freeway support to further shield its noise from the closest residence.

Taking the proposed abatement into account, the Project noise levels do not exceed the FTA standards at any noise-sensitive receptor.

Noise Conclusion

The noise study assessed Project construction noise for CEQA purposes using FTA criteria as the thresholds of significance. Because BART may reasonably be expected to implement measures

[10] The preliminary calculation details are provided in Appendix D of the Construction Noise Study.

to reduce construction noise to meet its own Facility Standards, the minimal, feasible amount of abatement necessary to achieve FTA standards (less stringent than the BART guidelines) is considered integral to the Project description. Taking that abatement into account, the Project noise levels do not exceed the FTA standards at any noise-sensitive receptor. As such, the Project would not cause any significant noise impacts under CEQA.

Community Impacts Assessment

A memorandum was produced to provide a focused assessment of potential community impacts associated with the K-Line Project (HNTB, *Assessment of Community Impacts Memorandum*, March 6, 2023). Specifically, construction-related impacts associated with traffic, air quality, noise, light/glare, and unsheltered persons were evaluated in regard to equity communities. Project features were recommended to avoid (or minimize) potential community impacts during Project construction.

No permanent community impacts are anticipated as a result of the proposed Project, which focuses on the maintenance and repair of existing BART infrastructure. Trackway work would occur entirely within BART's easement within the freeway median, requiring no permanent ROW acquisition or residential/commercial displacements. BART's operational noise levels and air pollutions emissions are not expected to change as a result of the proposed Project. Permanent access to businesses, community facilities (parks, hospitals, faith-based facilities, etc.), and transit services would also not be affected by the proposed Project. Bicycle and pedestrian infrastructure available to these communities would not be permanently altered. This proposed maintenance Project would not induce growth which would potentially displace rent-burdened households. Because no permanent community impacts are anticipated, the *Assessment of Community Impacts Memorandum* focuses on temporary impacts to equity communities and unsheltered persons associated with Project construction.

Equity Communities

All census tracts within and adjacent to the Project area were reviewed to identify equity communities. Where equity communities were identified, the potential for construction-related impacts was assessed. The following potential construction-related impacts to equity communities were evaluated: air quality, noise, and light/glare.

There are differing agency definitions for equity communities. For the purposes of this Project, all identified equity communities were evaluated for potential community impacts. These include communities identified as Environmental Justice, underserved, and disadvantaged communities. As the federal NEPA lead, Caltrans standards were used for defining and evaluating Environmental Justice communities.

Demographic information was collected at the census tract level to evaluate the Project area for potential equity communities. There are seven census tracks adjacent to the BART work

areas. Applying the various definitions for equity communities, three census tracts (4010, 4013, and 4014) were identified as having met the criteria. Within census tracts 4010, 4013, and 4014, proposed construction would remove and replace BART trackwork within its easement located within the freeway median. Related traction power, train control, and communication systems would be replaced as well. The potential for construction-related impacts to the identified equity communities was assessed. Project commitments were recommended, where needed, to avoid or minimize potential impacts to equity communities.

Traffic

Local traffic patterns would not be altered during construction, resulting in no impact to transit services or bicycle facilities along city streets. No shoulder or pedestrian or bicyclist access would be blocked (or closed) at any point of time during construction. Existing BART service would be maintained, which is an important transit service offered to all equity communities identified within the Project area. Access to the nearby MacArthur Station would not be affected by construction. The potential effect of weekend closures to BART service would be minimized by providing bus services between BART stations.

A traffic handling plan (THP) would be prepared showing how construction vehicles would enter and exit staging areas. If there was a high volume of trucks turning as they exit, the THP would consider providing a flagger. The THP would be reviewed by Caltrans whose input would be incorporated. The local community will be notified of the THP, if needed.

Avoidance and Minimization Measures

- A traffic handling plan would be prepared showing how construction vehicles would enter and exit staging areas, where applicable. Input from Caltrans would be incorporated.

Construction Noise

Construction-related noise could impact nearby residents, including equity communities. A Construction Noise Study was completed for the proposed Project (Wilson Ihrig 2023). Noise abatement measures were evaluated for the entire Project footprint, and proposed where necessary. (See preceding section.) This would ensure the Project remains in compliance with Federal Transit Administration (FTA) noise standards, which are the noise standards that BART uses for environmental evaluation and compliance. Complying with FTA standards would avoid construction-related noise impacts to equity communities as well as the general public. In order to minimize construction noise on adjacent communities, the Project would employ a number of measures.

Avoidance and Minimization Measures

- Portable equipment shielding that would enclose the noise source and block its line of sight with noise receptors
- Temporary noise barriers made of sound absorptive material that would also block the line of sight with noise receptors

- Some work would be limited to the daytime or night shifts would be shortened, when feasible.
- Use quieter equipment

Additional measures to limit impacts to residents living in the adjacent apartment complexes at the Sycamore Street staging area would include:

- Staging construction trailers between work and residences to help block noise
- Staging noisier operations on the east side of the site to have noise further away from receptors at the apartment complexes

Light and Glare

Measures would be incorporated into the Project to avoid light and glare on residences adjacent to the Project area. These measures would reduce light and glare during construction by focusing illumination downward and/or restricting light from extending beyond the construction boundaries. Light fixtures would be fitted with lenses, hoods, and reflectors to minimize spillover light and glare. Based on this, no construction-related impacts from light or glare are anticipated to equity communities.

Avoidance and Minimization Measures

- Light fixtures would be fitted with lenses, hoods, and reflectors to minimize spillover light and glare.

Air Quality

Construction-related PM emissions were evaluated under in the *Air Quality Impacts Memorandum* (HNTB 2023). (See the Air Quality analysis above.) Estimated PM emissions associated with the construction of the proposed Project would be far below established Bay Area Air Quality Management District (BAAQMD) thresholds. Based on this, the proposed Project is not expected to negatively impact the health of equity communities during construction.

Community Outreach

Community outreach to engage disadvantaged communities and provide an avenue to express community concerns helps contribute towards equity. BART would execute a public outreach plan to ensure the identified equity communities (and the general public) are aware of the proposed Project, its duration, and elements that have been incorporated to avoid construction-related impacts. BART's planned outreach efforts would include mailers, community meetings, social media notices, newspaper advertisements, briefings for elected officials, a project website, and a hotline with a call-in number to express concerns.

Avoidance and Minimization Measures

- Mailers: Residents adjacent to the Project area would receive a notice in the mail prior to construction. The mailer would be in multiple languages for the benefit of non-English speakers.

- Community Meetings: At least one community meeting would be held prior to construction. This would be located near the Project area at a community facility.
- Social Media Notices: BART would provide Project updates via its Facebook and Twitter sites. Project updates would be sent out prior to, and during, construction.
- Newspaper Advertisements: BART would formally notice the Project in a local newspaper prior to the start of construction. BART would identify additional non-English newspapers to post notices in, as well.
- Elected Official Briefings: BART would coordinate with local officials to inform them of the Project.
- Project Website: BART would create a Project website containing project information.
- Hotline: A call-in number would be provided for community members to contact the Project and express concerns.

Unsheltered Persons

Unsheltered persons have been documented within, or adjacent to, portions of the Project area in ROW owned by Caltrans and City of Oakland. This includes informal encampments along local roadways and within the Sycamore Street staging site. Due to the transitory nature of unsheltered persons, existing conditions will likely change prior to the start of Project construction. The presence of existing informal encampments suggests there is a high likelihood of encountering unsheltered persons within the Project area during construction.

In addition to informal encampments, a sanctioned encampment for unsheltered persons (the Northgate Tuff Shed Community) is located near the Project area at the southwest corner of the Northgate Avenue/27th Street intersection. This community is located on Caltrans ROW, and it includes 20 Tuff Shed shelters for 40 residents (City of Oakland 2018). The City of Oakland operates this encampment through an annual lease from Caltrans. The potential to impact this community during construction was flagged for further evaluation.

Informal encampments within construction, staging, and access areas would need to be relocated in advance of any work. BART, Caltrans, and the City of Oakland all have differing guidelines and standard procedures for the relocation of unsheltered persons. To comply with all applicable guidelines, the following Project commitments by BART would be followed (see full text of commitments in the *Assessment of Community Impacts Memorandum):*

Avoidance and Minimization Measures

- Prior to construction, official notices would be conspicuously posted in multiple languages along exterior boundaries, roads, sidewalks, and trails entering BART, Caltrans, and City of Oakland ROW.
- For those unsheltered person encampments located within Caltrans ROW, BART would coordinate with the Caltrans Maintenance Homeless Encampment Coordinator (or equivalent) prior to construction.

The following elements have been incorporated into the project description to avoid construction-related impacts to the Northgate Tuff Shed Community:

- A temporary noise barrier would be installed at the Sycamore Street staging area to block both the line of sight and sound from construction equipment, or work would be limited to the daytime.
- Measures would be incorporated to reduce light and glare from construction by focusing illumination downward and/or restricting light from extending beyond the construction boundaries.

The following measure is recommended for the Patton staging area to avoid potential community impacts:

- Construction staff would not be allowed to park along Patton Street near the proposed staging area. The vehicle travel lane and sidewalk would only be temporarily blocked during installation (and removal) of the EIC trailer and portable restrooms.

Community Impacts Conclusion

By incorporating the standard measures and commitments referenced in the Community Impacts section, no construction-related impacts from traffic, noise, light/glare, or air pollutant emissions are anticipated for Environmental Justice communities, underserved communities, disadvantaged communities, or unsheltered persons.

Environmental Evaluation Conclusion

The project is maintenance work to ensure the long-term safety and operability of BART's system infrastructure. No long-term change to BART operations or service would take place. No expansion of existing use would occur. With the exception of staging areas, the construction would take place within the portion of State right-of-way jointly occupied by BART and operated under a Joint Use and Maintenance Agreement with Caltrans.

Potentially significant construction impacts were analyzed for the most likely potential impacts: air quality, biological resources, noise, and community impacts. As described above, with the implementation of minimization measures and Project commitments, the analyses did not identify any significant project impacts. A list of BART's commitments to avoid and minimize potential impacts for all elements of the Project is presented in Attachment 4.

Possible Exceptions to CE

If a project is ordinarily exempt under any of the potential categorical exemptions, CEQA Guidelines Section 15300.2 provides specific instances where exceptions to otherwise applicable exemptions apply. In these cases, the CEQA exemption would not apply to a project.

Yes	No	Would the project be precluded from a Categorical Exemption due to the following exception per Guidelines Section 15300.2?
	X	(a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located. A project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.
	X	(b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.
	X	(c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.
	X	(d) Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.
	X	(e) Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.
	X	(f) Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

Relevant Exemptions

The project would meet the criteria of CEQA Guidelines Section 15301-Existing Facilities: a Class 1 exemption.

	Statutory Exemption
	Ministerial Exemption
X	Categorical Exemption: 15301, Class 1, Existing Facilities
	Emergency Exemption
	Other Exemption

15301. Existing Facilities

Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use.

In addition, CEQA Guidelines Section 15301(d) would apply to the project:

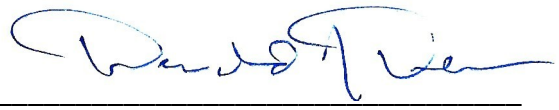
> (d) Restoration or rehabilitation of deteriorated or damaged structures, facilities, or mechanical equipment to meet current standards of public health and safety, unless it was determined that the damage was substantial and resulted from an environmental hazard such as earthquake, landslide or flood.

The project is determined to meet the qualifications for a Categorical Exemption for the following reasons among others:

1. None of the exceptions listed in CEQA Guidelines Section 15300.2, which would prohibit the use of a categorical exemption, apply to the project.
2. The project is to repair and maintain existing infrastructure essential to the safe operation of the BART system.
3. No expansion of current space or current use is proposed.
4. Construction activity generally will be limited to the BART rail portion of State right-of-way in the median of a freeway and three off-site staging areas, thereby reducing or eliminating potential construction impacts to surrounding communities.
5. Evaluation of the most likely project impacts (air quality, biological resources, community impacts, and noise) determined that the Project would not have any significant impacts.

DETERMINATION

No further environmental review is required. The project is categorically exempt under CEQA. An exemption from environmental review pursuant to the provisions of CEQA has been considered and approved:



3/21/2023

By Donald Dean
BART Manager of Environmental Review

Date

References

1. HNTB, BART K-Line Replacement Project-Air Quality Analysis, March 7, 2023.
2. HNTB, BART K-Line Replacement Project-Assessment of Biological Resources and Impacts, March 9, 2023.
3. HNTB, BART K-Line Replacement Project-Assessment of Community Impacts, March 6, 2023.

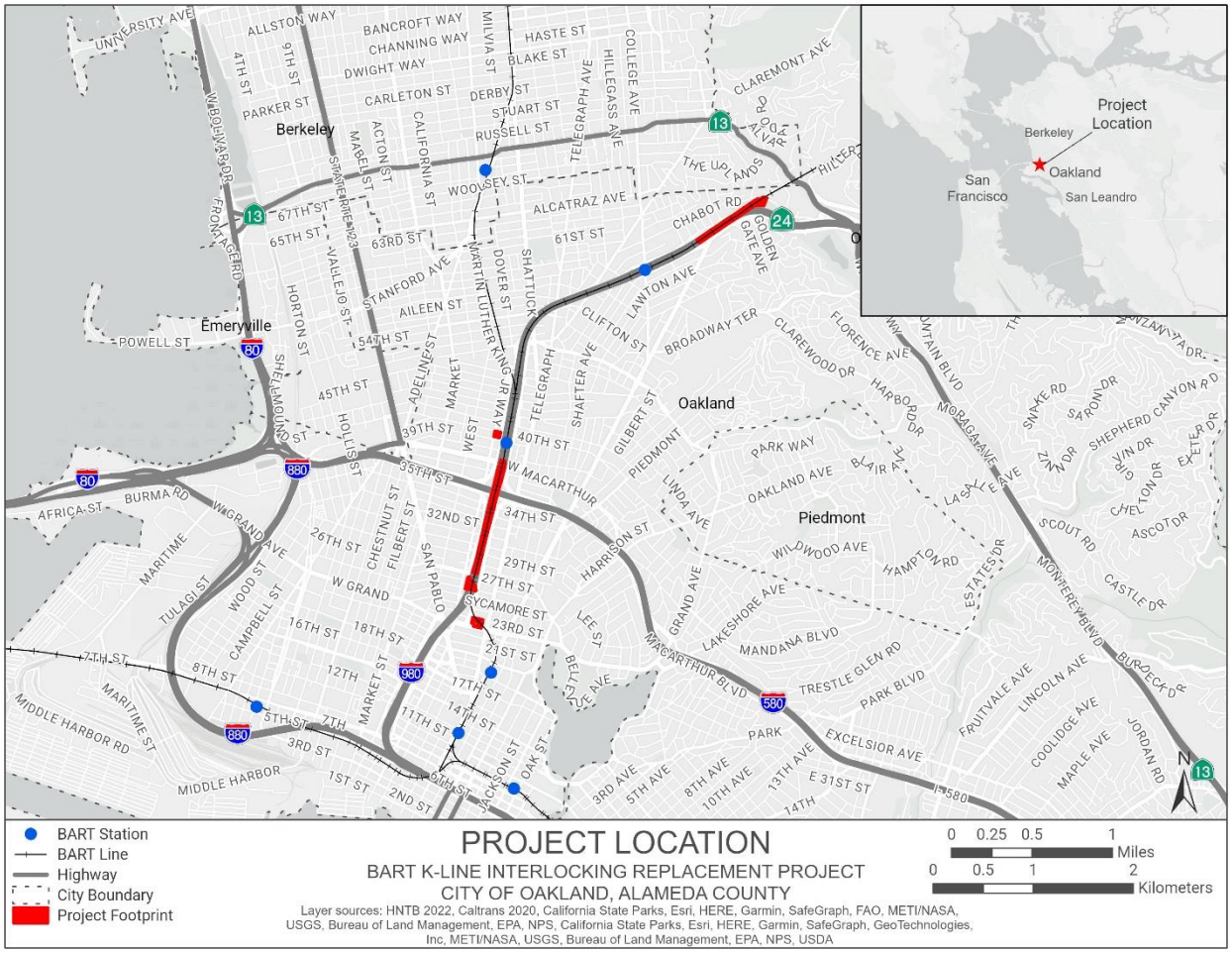
4. Wilson Ihrig, Construction Noise Study, BART K-Line Interlocking Replacement Project, Contract 15CQ-108, January 5, 2023.

Attachments

1. Project Location Map: K-Line Interlocking Replacement Project
2. K-Line Interlocking Track Replacement Project - Proposed Project Footprint
3. *Supplemental Information for the Patton Staging Area-Assessment of Potential Impacts* (HNTB, March 15, 2023).
4. List of BART K-Line Project Commitments and Avoidance and Minimization Measures

ATTACHMENT 1

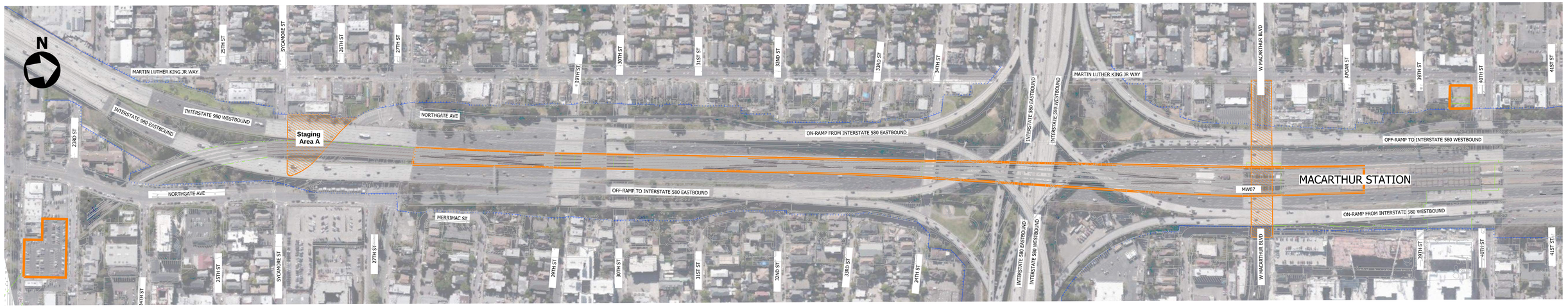
Project Location Map: K-Line Interlocking Replacement Project



ATTACHMENT 2:

K-LINE INTERLOCKING TRACK REPLACEMENT PROJECT-
PROPOSED PROJECT FOOTPRINT

K-LINE INTERLOCKING TRACK REPLACEMENT PROJECT - PROPOSED PROJECT FOOTPRINT



LEGEND:

- FOOTPRINT
- FOOTPRINT - UNDER FREEWAY
- BART EASEMENT
- CALTRANS RIGHT OF WAY

SCALE: 1" = 100'

DATE: 3/9/2023

ATTACHMENT 3:

SUPPLEMENTAL INFORMATION FOR THE PATTON STAGING AREA-ASSESSMENT OF POTENTIAL IMPACTS

MEMORANDUM

Date: March 20, 2023

To: Errol Douglas
BART
2150 Webster Street, 8th Floor
Oakland, CA 94612

From: Thomas J. Warrner, Senior Environmental Planner
Carie Montero, Environmental Planning Director
Nikki Jeffery, Project Manager

RE: **BART K-Line Interlocking Replacement Project**
Supplemental Information for the Patton Staging Area - Assessment of Potential Impacts
EA 0W520K ID 0420000254

The San Francisco Bay Area Rapid Transit District (BART) is undertaking the BART K-Line Interlocking Replacement Project in the City of Oakland. The purpose of this memorandum is to assess a new staging area on Patton Street that was added after completion of supporting environmental technical reports and memorandums were completed. This memorandum evaluates potential environmental impacts associated with the proposed Patton staging area and identifies project elements needed to avoid any potential impacts.

BART is the lead agency for environmental analysis for its K-Line Interlocking Replacement Project under the California Environmental Quality Act (CEQA). The California Department of Transportation (Caltrans) is the lead agency for this project under the National Environmental Policy Act (NEPA).

1.0 Supplemental Project Description

Patton Staging Area

Beginning in April 2023, BART would use a temporary staging area underneath State Route 24 (S.R. 24) within Caltrans right-of-way (ROW) for a BART employee in charge (EIC) trailer. This area is located approximately 0.1-mile north of the intersection of Patton Street/Broadway/Keith Avenue along the west side of Patton Street within the City of Oakland (Figure 1). This portion of Caltrans ROW is currently unused and is devoid of vegetative cover.

As compared to other portions of the overall Project footprint, the Patton staging area is not located in close proximity to nearby residences. Roadways adjacent to S.R. 24 (Broadway and Miles Avenue) provide additional separation from this staging area. As a result, the closest residence is approximately 100 feet away.

Figure 1: Additional Staging Area Location – Patton Staging Area (Source: Google Earth)

Construction staff would park at BART's Maintenance Way 09 (MW 09) located approximately 0.35 mile to the northeast of the site or BART's Rockridge Station approximately 0.5 mile to the southwest. From there, staff would travel to the EIC trailer at the Patton staging area. The EIC trailer would be used for construction briefings. It would be approximately 20 feet long by 10 feet wide and would be installed in a bare area under the highway (Figure 2). A set of nearby stairs in the median of S.R. 24 would then be used by construction staff to access the BART trackway and the work area. The trailer would be temporarily in place during each of the proposed five shutdown weekends. Staff would be active at this location between Saturday 12:30 am and Monday 4:00 am. Temporary, portable restroom facilities would be provided at this location for construction staff, as well.

The EIC trailer would be powered by a generator (Honda EU1000i, four stroke with noise rating less than 42 dB). Lighting would be used for staff safety and security. To reduce light and glare, all illumination would be focused downward to minimize light spillover and intrusion onto neighboring properties.

No sidewalk closures would occur during operation. Sidewalks would be briefly blocked when the trailer is installed/removed, which would occur at the beginning/end of each weekend shutdown period. Construction staff would be instructed to keep the sidewalk unobstructed during operation.

Figure 2: Proposed Layout of the Patton Staging Area (Source: Google Streetview)

2.0 Assessment of Potential Impacts

The following disciplines were previously reviewed for the full project to identify potential environmental impacts: noise, air quality, biological resources, and community resources. Technical specialists evaluated the proposed Patton staging area for potential impacts and proposed additional project measures, as appropriate, for incorporation into the project to avoid potential impacts.

2.1 Noise Impacts

Analysis

As documented in the previously prepared *Construction Noise Study* (Wilson Ihrig 2023), long-term noise measurements were made along the entire project corridor. Although noise levels varied by location, their diurnal pattern was very similar across all of the measurement sites. This pattern was attributed to the noise environment along the project corridor being dominated by S.R. 24 and, to a lesser extent, BART operations.

To assess potential noise impacts at the proposed Patton staging area, a 15-minute short-term measurement was made on March 3, 2023. This data was used to estimate noise levels throughout the day at the Patton staging area using the previously identified diurnal pattern. Based on this assessment, the existing ambient level would be approximately 66 dBA when the EIC trailer and restrooms would be deployed (10:00 p.m.), and approximately 67 dBA when they would be retrieved (6:00 a.m.).

The loudest aspect of deploying and retrieving the EIC trailer and restrooms would be the backup alarm that would presumably be used when putting these into position. The typical backup alarm noise produces 75 dBA at a distance of 50 feet. The closest residence to the EIC trailer location is about 100 feet away. The backup alarm would be a point source, so noise levels would attenuate 6 dB for every doubling of distance (equating to 6 dB reduction in this case). The resulting exterior noise level at the closest residence would be 69 dBA. This is only 2 to 3 dB higher than the existing ambient which is dominated by broad-spectrum freeway noise. Because of this, the noise from the backup alarm would

be well masked by ambient noise. Even with windows open, the interior noise level of the alarm would be 10 to 15 dB lower than the exterior noise level (equating to 54 to 59 dBA). This level is below that of normal conversation (65 dBA) and would be unlikely to be noticed. In the unlikely event that a complaint about the backup alarm is received, it would be possible to forgo the alarm by using a flag-person to spot the trailer while being positioned.

Electricity to the EIC trailer would be provided by a Honda EU1000i generator. This unit produces 50 dBA at its rated load of 1,000 watts. At the closest residence to the EIC trailer (100 feet away), the noise level would attenuate to 37 dBA which would be inaudible against the existing ambient noise level. Despite this, the generator should be placed on the opposite side of the freeway support behind the EIC trailer. That would shield its noise and add an additional 75 feet to the closest residence. The maximum noise level would then be 32 dBA.

Recommended Measures

The following additional project measures are recommended for the Patton staging area to avoid potential noise impacts:

- If a complaint is received about the truck backup alarm, the EIC trailer and restrooms would be placed using a flag-person to spot them while being positioned.
- The generator used to power the EIC trailer would be placed on the opposite side of the freeway support to further shield its noise from the closest residence.

2.2 Air Quality Impacts

Analysis

The project's *Air Quality Analysis Memorandum* (HNTB 2023) previously assessed construction-related particulate matter (PM) emissions using the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model (RCEM) (version 9.0.0). The potential influence of the Patton staging area on the original model outputs were evaluated for the following categories: material hauling, worker commutes, and operation of off-road construction equipment.

- **Material Hauling:** The EIC trailer and portable restrooms would be delivered and removed during each weekend shutdown period. This would add five additional round trips for a single truck with a trailer. In the original model, material hauling represented less than 0.5% of the project's estimated PM emissions. Based on the limited number of trips and the low contribution of material hauling to overall PM emissions, no substantial changes are anticipated from adding additional vehicle trips to the Patton staging area.
- **Worker commutes**: The RCEM previously considered PM emissions associated with worker commutes. Traveling to/from the Patton staging area instead of another destination within the project footprint would not affect the general estimate for a one-way commute (20 miles) including in the original model. Based on this, PM emissions tied to worker commutes would not be expected to change after incorporating the Patton staging area.
- **Operation of Off-road Construction Equipment:** The EIC trailer would be powered by a generator (Honda EU1000i). There would be additional PM associated with the use of this generator. Based on its specifications, the generator is approved by the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (USEPA). Additionally, the fuel load/per hour is low compared to the other construction equipment proposed during project construction that were analyzed in the original memorandum. The generator would only operate over the five weekend shutdowns. Based

on these considerations, the use of this generator would not change the emissions estimated by the original RCEM.

Recommended Measures

Based on the above, the findings in the original *Air Quality Analysis Memorandum* (HNTB 2023) for PM emissions remain valid. No new air quality measures are needed.

2.3 Biological Resource Impacts

Analysis

The proposed Patton staging area falls within the biological study area (BSA) used in the previously prepared *Assessment of Biological Resources and Impacts Memorandum* (HNTB 2023). As part of that assessment, multiple databases were reviewed for special-status wildlife and plant species as follows: U.S. Fish and Wildlife (USFWS) Information for Planning and Consultation (IPAC); National Marine Fisheries Service (NMFS) California Species List Tools; California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB); California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS); National Wetlands Inventory (NWI); Web Soil Survey; Ebird; and INaturalist.

A biological resources field review was conducted at the proposed Patton staging area on February 17, 2023. The area associated with the proposed EIC trailer and portable restrooms is currently devoid of vegetation. Based on this lack of vegetation, the Patton staging area does not provide habitat for sensitive natural communities or typical species. As such, it also does not have suitable habitat foraging habitat for adult monarch butterflies (*Danaus plexippus*), which are a federal candidate species. There would be potential for bird and/or bat nesting in the highway structure above the proposed staging area. During the field review, bird guano was observed around weep holes in this structure indicating it is used for roosting and/or nesting. Measures were recommended in the previously prepared *Assessment of Biological Resources and Impacts Memorandum* (HNTB 2023) to prevent impacts to bird and bat species. Pertinent protection measures to these species remain applicable at the Patton staging area and are as follows:

- **Worker Environmental Awareness Training:** A pre-construction meeting for construction personnel will be held, during which the environmental requirements, including AMMs, will be explained.
- **Protection of Migratory Birds**: To avoid take of migratory birds during the bird nesting season (February 1 to September 30):
    - To the extent feasible, vegetation removal will only occur between October 1 and January 31.
    - A BART-approved biologist will conduct preconstruction nesting bird surveys no more than three days prior to construction.
    - If an active nest is discovered, a qualified biologist will establish an appropriately sized no work buffer around the nest — no less than 50 feet for passerines and no less than 300 feet for raptors. The area within the buffer will be avoided until young are no longer dependent on the adults or the nest is no longer active. The biologist may remove partially constructed or inactive nests to prevent occupation.
    - Preconstruction surveys will be repeated if there is a lapse in work for 72 hours or more.
- **Roosting Bats:** Within one week (between September 1 and March 31, or two weeks during maternity season between April 1 and August 31) prior to tree removals or modifications to crevices or cavities in buildings or structures, the BART biologist will conduct a survey looking for

evidence of roosting bats. If bat signs are detected, biologists will conduct an evening visual emergence survey of the bridge or structure from a half hour before sunset until one to two hours after sunset for a minimum of two nights. If a potentially active bat roost is in the tree or structure to be modified, passive monitoring with full-spectrum bat detectors will be used to assist in determining the species present. To the extent possible, all monitoring will be conducted during favorable weather conditions (calm nights with temperatures conducive to bat activity and no precipitation predicted). The biologist will analyze the bat call data using appropriate software.

If active maternity roosts are identified in features that will be impacted by construction, work within 50 feet would be stopped. CDFW would be consulted to determine the appropriate course of action. The BART biologist will prepare a treatment plan, subject to CDFW approval. The biologist will implement the treatment plan before the commencement of any ground-disturbing activities within 50 feet of the maternity roost.

If non-breeding bats are found roosting in features that will be impacted by construction, the biologist will facilitate the eviction of the bats by installing one-way doors or other appropriate methods that minimize stress to the bats while ensuring they leave the roost. BART will leave the roost undisturbed for a minimum of one week after implementing exclusion and/or eviction activities prior to modifying the feature.

- **Construction Lighting:** Light pollution from construction, including night work, will be minimized, such as by shielding and pointing lighting downwards and away from habitat suitable for native species. Suitable habitat includes structures that may support native bats.

Recommended Measures

With the incorporation of the previously identified measures, no impacts to biological resources are anticipated as a result of the proposed construction activity at the Patton staging area. The findings in the originally *Biological Resources and Impacts Memorandum* (HNTB 2023) remain valid. No additional measures are needed.

2.4 Community Impacts Analysis

Analysis

Community Profile

Using the methodology outlined in the *Assessment of Community Impacts Memorandum* (HNTB 2023), demographic information was collected at the census tract level to evaluate the presence of Metropolitan Transportation Commission (MTC) Equity Priority Communities (EPC) or Environmental Justice (EJ) communities. The Patton staging area falls within Census Tract 4043, which was originally evaluated under the previous memorandum and determined not to contain EPC or EJ communities. Based on aerial imagery and a field review (February 17, 2023), single-family residences are located along both sides of S.R. 24 near the proposed staging area. The closest residence is located approximately 100 feet to the north. Chabot Elementary School is located approximately 500 feet to the northeast.

Equity Community Impact Analysis

Because analysis of census data indicated the absence of EPC and EJ communities, no disproportionate and adverse impacts to equity communities would occur from the use of the Patton staging area.

The *Assessment of Community Impacts Memorandum* (HNTB 2023) evaluated potential community impacts associated with traffic, light/glare, noise, and air quality. Sections 2.1 and 2.2 (above) summarize the analysis of noise and air quality impacts. The remaining categories are discussed below.

- **Traffic**: Construction staff would not be allowed to park along Patton Street near the proposed staging area. The vehicle travel lane and sidewalk would only be temporarily blocked during installation (and removal) of the EIC trailer and portable restrooms. These activities would occur during the early morning hours and would therefore not be expected to have an impact on motorists or pedestrians traveling through the area. A traffic handling plan (THP) would be prepared for the project and would evaluate construction vehicle access to all staging areas, where applicable.
- **Light/glare**: The EIC trailer and portable restrooms would have outdoor lighting for staff safety and security. To avoid impacts from this additional lighting on nearby residents, all construction lighting would be focused downward and/or restricted from extending beyond the construction boundaries. Light fixtures would be fitted with lenses, hoods, and reflectors to minimize spillover light and glare.

Based on this analysis, no construction-related community impacts are anticipated.

Unsheltered Persons

A field review was conducted at the Patton staging area on February 17, 2023. At that time, no unsheltered person encampments were observed within, or near, the proposed staging area. Due to the transitory nature of unsheltered persons, existing conditions could change prior to the start of construction (or in between each weekend shutdown period). If an encampment is in conflict with the staging area or its access, it would need to be relocated following the measures outlined in the *Assessment of Community Impacts Memorandum* (HNTB 2023). Applicable measures to the Patton staging area are as follows:

- Prior to construction, official notices would be conspicuously posted along exterior boundaries, roads, sidewalks, and trails entering BART, Caltrans, and City of Oakland ROW. Noticing would be provided in multiple languages. These notices would formally alert occupants 72 hours prior to the deadline for occupants to vacate with their personal property. The formal notices would include information on available social services and shelters, location(s) where non-vacated personal belongings would be stored, how long belongings would be stored (minimum 90 days), and how to retrieve removed belongings. Informal outreach with unsheltered occupants would occur at least three weeks prior to posting of these notices.
- For those unsheltered person encampments located within Caltrans ROW, BART would coordinate with the Caltrans Maintenance Homeless Encampment Coordinator (or equivalent) prior to construction. Caltrans may wish to conduct a visual assessment of its ROW to determine if there are any additional requirements prior to clearing any encampments. State/local law enforcement assistance would also be coordinated through Caltrans, if required.

<u>Recommended Measures</u>

In addition to original measures identified for the project, the following measures are recommended for the Patton staging area to avoid potential community impacts:

- Construction staff would not be allowed to park along Patton Street near the proposed staging area. The vehicle travel lane and sidewalk would only be temporarily blocked during installation (and removal) of the EIC trailer and portable restrooms.

- Outdoor lighting for the EIC trailer would be focused downward and/or restricted from extending beyond the construction boundaries. Light fixtures would be fitted with lenses, hoods, and reflectors to minimize spillover light and glare.

3.0 Conclusions

Potential environmental impacts associated with the use of the Patton staging area were evaluated. With incorporation of several project elements, all potential impacts identified in this memorandum would be avoided. Based on this, no potential environmental impacts associated with the use of the Patton staging area were identified.

4.0 References

HNTB. 2023. BART K-Line Interlocking Replacement Project-Air Quality Analysis Memorandum, March 7.

HNTB. 2023. BART K-Line Interlocking Replacement Project-Assessment of Biological Resources and Impacts Memorandum, March 9.

HNTB. 2023. BART K-Line Interlocking Replacement Project-Assessment of Community Impacts Memorandum, March 6.

Wilson Ihrig. 2023. BART K-Line Interlocking Replacement Project Construction Noise Study, January 5.

ATTACHMENT 4

BART K-LINE PROJECT COMMITMENTS AND AVOIDANCE AND MINIMIZATION MEASURES

(Complete text of the measures listed is in the sources referenced.)

PRE-CONSTRUCTION

CATEGORY	SOURCE	BRIEF DESCRIPTION	ACTION
Biology	Assessment of Biological Resources and Impacts Memorandum	Worker Environmental Awareness Training	A pre-construction meeting for construction personnel will be held, during which the environmental requirements will be explained.
Biology	Assessment of Biological Resources and Impacts Memorandum	Protection of Migratory Birds	Preconstruction nesting surveys
Biology	Assessment of Biological Resources and Impacts Memorandum	Protection of Roosting Bats	Preconstruction survey looking for evidence of roosting bats.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Mailers	Residents adjacent to the Project area would receive a notice in the mail prior to construction. The mailer would be in multiple languages for the benefit of non-English speakers.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Community Meetings	At least one community meeting would be held prior to construction. This would be located near the Project area at a community facility.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Social Media	BART would provide Project updates via its Facebook and Twitter sites. Project updates would be sent out prior to, and during, construction.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Newspaper Advertisements	BART would formally notice the Project in a local newspaper prior to the start of construction. BART would identify additional non-English newspapers to post notices in, as well.

Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Elected Official Briefings	BART would coordinate with local officials to inform them of the Project.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Project Website	BART would create a Project website containing project information.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Hotline	A call-in number would be provided for community members to contact the Project and to express concerns.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Unsheltered Persons	Prior to construction, official notices would be conspicuously posted along exterior boundaries, roads, sidewalks, and trails entering BART, Caltrans, and City of Oakland ROW. Postings would be translated in multiple languages for the benefit of non-English speakers.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Community Outreach, Unsheltered Persons	For those unsheltered person encampments located within Caltrans ROW, BART would coordinate with the Caltrans Maintenance Homeless Encampment Coordinator (or equivalent) prior to construction.

CONSTRUCTION

CATEGORY	SOURCE	BRIEF DESCRIPTION	ACTION
Air Quality	Air Quality Analysis Memorandum	Exhaust Emissions	The Project would use Tier 4 construction equipment.
Air Quality	Air Quality Analysis Memorandum	Fugitive Dust Emissions	All vehicle speeds on unpaved roads would be limited to 15 miles per hour (mph).
Air Quality	Air Quality Analysis Memorandum	Fugitive Dust Emissions	Stabilization of disturbed areas would be done as soon as possible (including paving and vegetation establishment).
Air Quality	Air Quality Analysis Memorandum	Fugitive Dust Emissions	When average wind speeds exceed 20 mph, excavation, grading, and/or demolition activities would be avoided, where feasible, to minimize airborne dust.

Air Quality	Air Quality Analysis Memorandum	Fugitive Dust Emissions	Equipment and materials storage sites would be located as far away from residential and park uses as practicable. Construction areas would be kept clean and orderly.
Air Quality	Air Quality Analysis Memorandum	Fugitive Dust Emissions	Construction activities (such as excavation, grading, and ground-disturbing) would be phased to reduce the number of disturbed surfaces at any one time to the extent feasible.
Air Quality	Air Quality Analysis Memorandum	Fugitive Dust Emissions	A publicly visible sign would be posted with the Project Hotline to contact regarding dust complaints. The BAAQMD phone number would also be visible to ensure compliance with applicable regulations.
Air Quality	Air Quality Analysis Memorandum	Greenhouse Gas Emissions	Regular maintenance of vehicles and equipment.
Air Quality	Air Quality Analysis Memorandum	Greenhouse Gas Emissions	Limit idling of vehicles and equipment onsite.
Air Quality	Air Quality Analysis Memorandum	Greenhouse Gas Emissions	If practicable, recycle nonhazardous waste and excess material. If recycling is not practicable, dispose of material.
Air Quality	Air Quality Analysis Memorandum	Greenhouse Gas Emissions	Use solar and electricity as power sources, if feasible.
Biology	Assessment of Biological Resources and Impacts Memorandum	Construction Lighting	Minimize light pollution from construction, including night work. Light fixtures would focus illumination downward, and/or be outfitted with lenses, hoods, and reflectors to minimize spillover light and glare beyond the construction boundaries.
Biology	Assessment of Biological Resources and Impacts Memorandum	Water Quality	SWPPP prepared and implemented during construction, if applicable.
Biology	Assessment of Biological Resources and Impacts Memorandum	Weed Control	Control the spread of noxious weeds disturbed during construction.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Traffic	No shoulder or pedestrian or bicyclist access would be permanently blocked (or closed) at any point of time during construction. Construction staff would not be

			allowed to park along Patton Street near the proposed staging area.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Traffic	A traffic handling plan would be prepared showing how construction vehicles would enter and exit staging areas, where applicable. Input from Caltrans would be incorporated.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	Portable equipment shielding that would enclose the noise source and block its line of sight with noise receptors.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	Temporary noise barriers made of sound absorptive material that would also block the line of sight with noise receptors.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	Some work would be limited to the daytime or night shifts would be shortened, when feasible.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	Use quieter equipment
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	Staging construction trailers between work and residences to help block noise.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	Staging noisier operations on the east side of Sycamore Street site to have noise further away from receptors at the apartment complexes.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	If a complaint is received about the truck backup alarm, the EIC trailer and restrooms at Patton St would be placed using a flag-person to spot them while being positioned.
Community Impact Assessment	Assessment of Community Impacts Memorandum	Construction Noise	The generator used to power the EIC trailer at Patton St would be placed on the opposite side of the freeway support to further shield its noise from the closest residence.