2996 Telegraph Avenue
INITIAL STUDY

City of Berkeley

February 2023

URBAN PLANNING PARTNERS INC.

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I. PROJECT DESCRIPTION

1. **Project Title:**

   2996 Telegraph Avenue, Salkhi Petroleum Car Wash

2. **Lead Agency Name and Address:**

   City of Berkeley Planning & Development Department, Land Use Division
   1947 Center Street, 2nd Floor
   Berkeley, California 94704

3. **Contact Person and Phone Number:**

   Nilu Karimzpadegan, Associate Planner
   City of Berkeley
   (510) 981-7430

4. **Project Location:**

   The project site is located at 2996 Telegraph Avenue, at the northwest corner of Telegraph and Ashby Avenue in South Berkeley on Accessor's Parcel Number (APN) 052-1578-006-02 (see Figure 1). The project site is approximately 0.86 acres (37,327 square feet) and is currently developed with a Chevron gas station that includes 12 gas pumps, a convenience store, a fast food restaurant, and 30 surface parking spaces (see Figure 2).

5. **Project Sponsor's Name and Address:**

   Erin Raya
   Barghausen Consulting Engineers, Inc.
   18215 72nd Avenue
   Kent, WA 98032

6. **General Plan Designation:**

   Avenue Commercial (AC)

7. **Zoning:**

   Corridor Commercial (C-C)

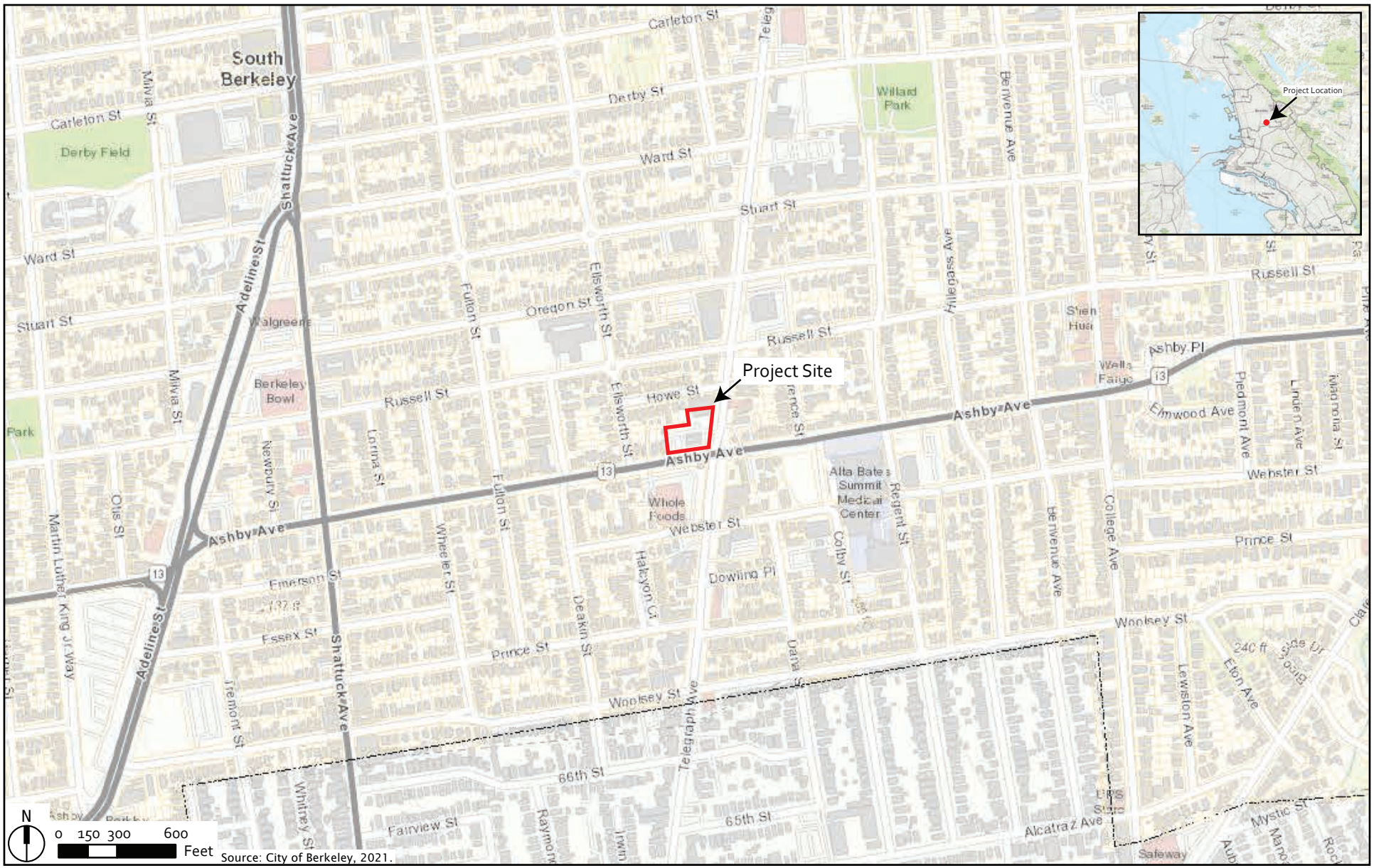


Figure 1
Project Location and Vicinity

Figure 2
Project Site and Context

8. Description of Project Components:

The project sponsor is proposing to construct a 960-square-foot self-service, single-bay, roll-over automated vehicle wash on the western corner of the project site. The project also includes three vacuum stations, two electric vehicle (EV) charging stations, and a 6-foot-tall concrete-masonry unit (CMU) wall constructed to the north and west of the proposed automated vehicle wash. All improvements would be located along the western portion of the project site (see Figure 3). The existing Chevron gas station, convenience store, fast food restaurant, and metal fence located along the northern property line are proposed to remain on site. The existing trash enclosure will be utilized and has been approved by the City's Department of Public Works on February 17, 2022. The proposed improvements would reduce the amount of existing impervious area from 6,522 square feet to 5,488 square feet (net reduction of 1,034 square feet). The existing facility employs 11 individuals and no new employees are proposed as part of the project.

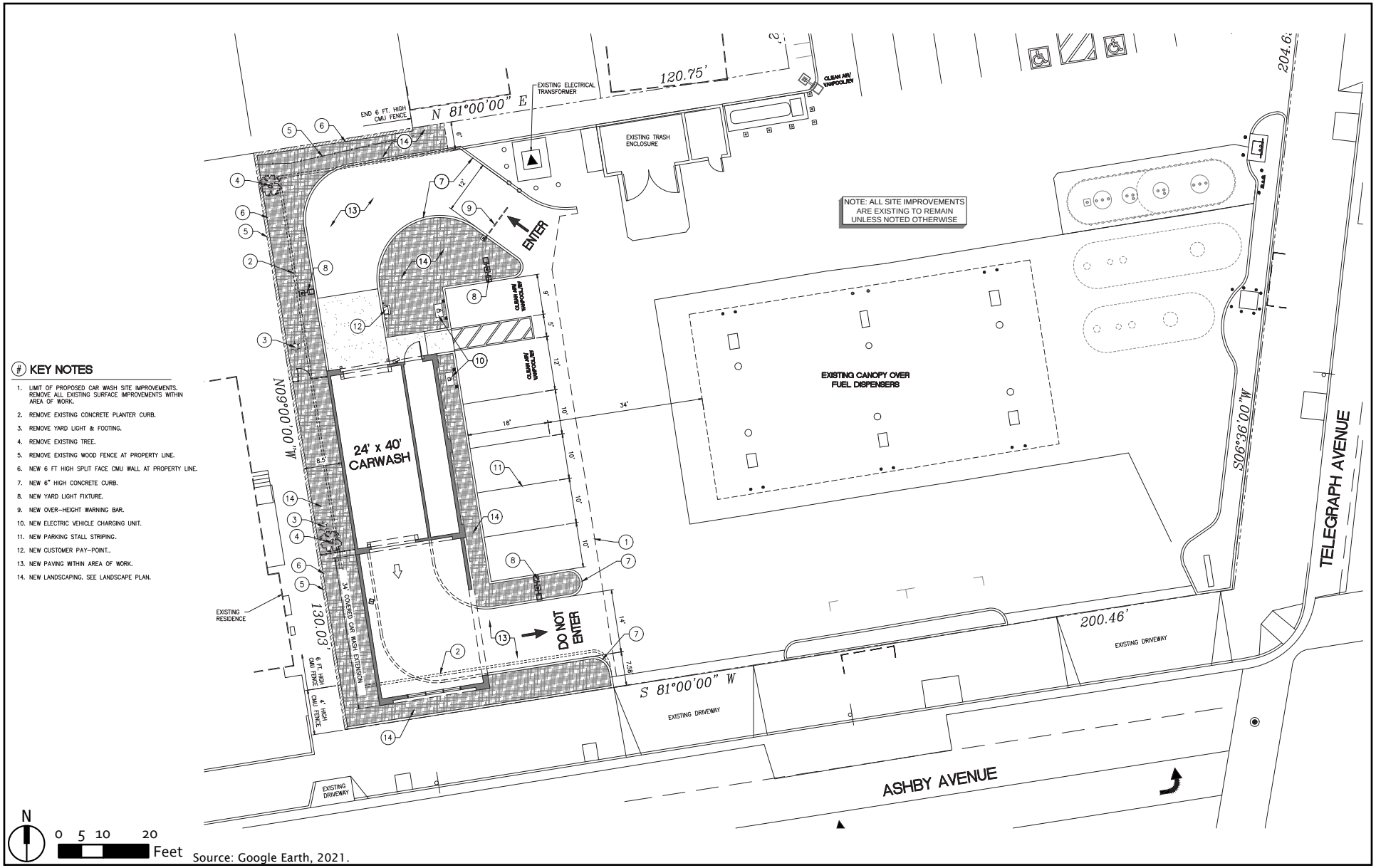
The existing project site includes 30 existing parking stalls. The project proposes to re-stripe the existing parking area to provide a total of 15 parking stalls which includes 3 parking stalls dedicated to the vacuum stations. Direct access to the project site is provided via multiple driveways along Telegraph Avenue and Ashby Avenue. The project does not propose to alter access points.

Existing lighting is located along the site boundary, at the gas pumps, and convenience store. The project does not propose to alter the existing lighting; however, new lights would be added to illuminate the parking stalls and vehicle wash. All proposed lighting would be shielded and directed downward and conform to the City's exterior lighting requirements pursuant to Berkeley Municipal Code (BMC) 23.304.130(C)(2).

Pacific Gas and Electric (PG&E), the energy service provider, confirmed that the existing transformer is feasible for the project.[1] An additional panel would be required at the electrical cabinet and underground power service will be routed to serve the EV chargers and the vehicle wash.

The project site includes landscaping along the perimeter of the site comprised of ornamental shrubs and six trees. The landscape plan identifies three existing trees for removal, none of which qualify for protection under MBC Chapter 6.52, Moratorium on the Removal of Coast Live Oak Trees. The project would add a landscaped area with ornamental shrubs and three trees one along the eastern boundary of the proposed vehicle wash.

[1] Anderson, Sean, 2022. Email communication with Urban Planning Partners. March 15.



Source: Google Earth, 2021.

Figure 3
Proposed Site Plan

The vehicle wash proposes implementation of a reclaim system to facilitate recycling efforts of discharge rinse water from vehicle wash operations. An inlet will be installed at the vehicle wash slab to collect runoff route it through two 1,500-gallon reclaim tanks. The reclaim tanks will route the drainage through a system of baffle sections which allows the drainage to collect prior being conveyed to the next baffle area. This process allows discharge to separate contributing debris and solid particles to settle to the bottom of the tank and oils float to the top where they are trapped within the system. The final baffle section contains two 2-inch suction lines which pump treated water back to the reclaim system for reuse. The cleaning detergents used for the vehicle wash would be non-hazardous and any excess rinse water from the vehicle wash operations would be discharged to the public sewer system following reclamation. Settled solids and floating oils are periodically extracted (typically every three to six months) directly from the tank system via manual pumping and maintenance efforts. No secondary contamination is anticipated. Design of the reclaim tank system will be included during construction permitting efforts.

Construction of the proposed carwash would require the use of typical diesel-powered construction equipment. Construction is anticipated to begin upon permit approval in 2023 and would occur over a period of approximately three months.[2]

9. **Surrounding Land Uses and Setting:**

The surrounding neighborhood includes a mix of commercial and residential uses (see Figure 2, above). The project site is bounded by single-family residential and commercial land uses to the north, commercial uses to the east and south, and single-family residential to the west. Sylvia Mendez Elementary School is located less than 0.25 miles to the northwest of the project site. As noted above, the project site is completely developed with a Chevron gas station and associated structures. On-site landscaping includes ornamental shrubs and six trees along the perimeter of the site.

10. Other Public Agencies Whose Approval is Required:

None.

[2] Ibid.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Upon receipt of the project application, the City of Berkeley notified the Ohlone Tribe in September 2020. No request for consultation was received in response.

12. Requested Applications:

Lead Agency	Required Permit
City of Berkeley	Design Review[3] Use Permit[4]

[3] Pursuant to Berkeley Municipal Code Section 23.406.070.

[4] Pursuant to Berkeley Municipal Code Section 23.406.040.

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II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- ❒ Aesthetics
- ❒ Agriculture and Forestry Resources
- ❒ Air Quality
- ❒ Biological Resources
- ❒ Cultural Resources
- ❒ Energy
- ❒ Geology/Soils
- ❒ Greenhouse Gas Emissions
- ❒ Hazards and Hazardous Materials
- ❒ Hydrology/Water Quality
- ❒ Land Use/Planning
- ❒ Mineral Resources
- ❒ Noise
- ❒ Parks and Recreation
- ❒ Population/Housing
- ❒ Public Services
- ❒ Transportation
- ❒ Tribal Cultural Resources
- ❒ Utilities/Service Systems
- ❒ Wildfire
- ❒ Mandatory Findings of Significance

Determination:

On the basis of this initial evaluation:

- ■ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ❒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ❒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ❒ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ❒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION,

including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

III. ENVIRONMENTAL CHECKLIST

A. AESTHETICS

Environmental Setting

The project is located in the City of Berkeley, on the eastern shore of the San Francisco Bay in northern Alameda County. The project site is currently occupied by an existing Chevron gas station that includes 12 gas pumps, a convenience store, a fast-food restaurant, and 30 surface parking spaces. The project site is bounded by single-family residential and commercial land uses to the north, commercial uses to the east and south, and single-family residential to the west. Sylvia Mendez Elementary School is located less than 0.25 miles to the northwest of the project site. On-site landscaping includes ornamental shrubs and six trees along the perimeter of the site.

There are no eligible or officially designated State Scenic Highways near the project site. The nearest State-designated Scenic Highway, State Route 24 (SR-24), is located 3 miles east of the project site.[5]

Impact Analysis

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?	☐	☐	☐	☒
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?)	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

[5] California Department of Transportation (Caltrans), 2018. California State Scenic Highway System Map. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed January 12, 2023.

a) Have a substantial adverse effect on a scenic vista?

No impact. The project is not located within a designated view corridor; however, views of the Berkeley and Oakland hills are available from the public right of way looking east along the east-west running streets. The project does not propose any improvements along the public right of way, and proposed construction of the 14-foot-tall vehicle wash facility would not substantially block any of these views along the public right of way. Therefore, the project would not adversely affect a scenic vista and no impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?

No Impact. There are no eligible or officially designated State Scenic Highways near the project site. The nearest State-designated Scenic Highway, State Route 24 (SR-24), is located 3 miles east of the project site.[6] Therefore, the proposed project would not substantially damage scenic resources within a State Scenic Highway, and no impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?)

Less Than Significant. The project is in an urbanized area, is completely paved, and serves as an existing gas station. The proposed project would construct a 960-square vehicle wash with associated structures on the western corner of the project site.

The proposed project is consistent with the Avenue Commercial (AC) land use designation and Corridor Commercial (C-C) Zoning District which allow for vehicle wash uses on the project site. In addition, enforcement of the City's design review process would avoid conflict with regulations governing scenic quality. Pursuant to BMC 23.406.070, the City's design review process evaluates projects for conformance with the adopted non-residential design guidelines and other applicable design standards. Therefore, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality, and the impact would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant. Proposed on-site lighting would be required to comply with the City of Berkeley's Zoning regulations regarding commercial lots abutting residential lots. Specifically, BMC Section 23.304.130(C)(2) requires that exterior lighting shall be shielded in a manner which avoids direct glare onto abutting lots in a residential district. Compliance with these regulations

[6] Ibid.

and required design review would ensure that installation of new lighting would only result in a less-than-significant impact.

B. AGRICULTURAL AND FOREST RESOURCES

Environmental Setting

The project is within an urban area in Berkeley, California and is not designated as any of the agricultural and forestry resources listed in the CEQA checklist below.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California agricultural Land Evaluation and Site Assessment model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significantly environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection (CAL FIRE) regarding the State's inventory of forest land, including the Fire and Range Assessment Program and the Forest Legacy Program, and forest carbon measurement methodology provided in forest protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to a non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Governmental Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or mature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact (a through e). The project site is in an urbanized area surrounded by residential and commercial land uses, and the site does not have any farmland, Williamson Act contracts, or forest land. The property's C-C zoning is not associated with agricultural, forestland, or timber productions. Therefore, the project would not conflict or result in the loss of agricultural, forestland, or timberland resources. No impact would occur.

C. AIR QUALITY

Environmental Setting

All criteria air pollutants that would be generated by the project are associated with adverse health effects (e.g., cardiovascular disease and asthma). In accordance with the federal Clean Air Act and California Clean Air Act, areas in California are classified as either in attainment, maintenance (i.e., formerly nonattainment), or nonattainment of the National Ambient Air Quality Standards and California Ambient Air Quality Standards for each criteria air pollutant. These standards were designed to minimize health risks to communities exposed to criteria air pollutants. The project site is in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB is designated as a nonattainment area for ozone, coarse particulate matter (PM10), and fine particulate matter (PM2.5).

Regional air pollutants, such as ozone, PM10, and PM2.5, can be formed and/or transported over long distances and affect ambient air quality far from the emissions source. Ground-level ozone is formed through reactions of nitrogen oxides (NOx) and reactive organic gases (ROG) in the presence of sunlight. The magnitude and location of specific health effects from exposure to increased ozone, PM10, and PM2.5 concentrations are the result of emissions generated by numerous sources throughout the SFBAAB, rather than a single project. The BAAQMD has adopted thresholds of significance to assist lead agencies in the evaluation of ozone precursors (NOx and ROG), PM10, and PM2.5 emitted from individual projects that could have a cumulatively considerable contribution to adverse air quality in the SFBAAB.[7]

Localized air pollutants generally dissipate with distance from the emission source but can pose a health risk to nearby populations. Toxic air contaminants (TACs), such as diesel particulate matter (DPM), are considered localized pollutants. PM2.5 is also considered a localized air pollutant, in addition to being considered a regional air pollutant. Air dispersion models are used to reliably quantify the health risks to nearby receptors associated with emissions of localized air pollutants from an individual project. The BAAQMD has adopted thresholds of significance to assist lead agencies in the evaluation of health risks for people exposed to TACs and PM2.5 emissions from an individual project.

The BAAQMD and other air districts use regional air dispersion models to correlate the cumulative emissions of regional pollutants to potential community health effects. However, these dispersion models have limited sensitivity to the relatively small (or negligible) changes in criteria air pollutant concentrations associated with an individual project. Therefore, it is not

[7] Bay Area Air Quality Management District (BAAQMD), 2017a. CEQA Air Quality Guidelines. May. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed January 12, 2023.

feasible to provide reliable estimates of specific health risks associated with regional air pollutant emissions from the proposed project.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant. In accordance with the federal Clean Air Act and California Clean Air Act, BAAQMD is required to prepare and update an air quality plan that identifies measures by which both stationary and mobile sources of pollutants can be controlled to achieve federal and State ambient air quality standards. In April 2017, the BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate (2017 CAP), which includes 85 control measures to reduce ROG, NOx, PM10, PM2.5, TACs, and greenhouse gases (GHGs).[8] The 2017 CAP was developed based on a multi-pollutant evaluation method that incorporates well-established studies and methods in quantifying the health benefits and air quality regulations, computer modeling and analysis of existing air quality monitoring data and emission inventories, and growth projections prepared by the Metropolitan Transportation Commission and the Association of Bay Area Governments.

Based on the BAAQMD's current CEQA Air Quality Guidelines, the following criteria should be considered to determine if a project would conflict with or obstruct implementation of the 2017 CAP:

- Does the project include applicable control measures from the air quality plan?

[8] Bay Area Air Quality Management District (BAAQMD), 2017b. Clean Air Plan: Spare the Air, Cool the Climate. April 19. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed January 12, 2023.

- Does the project disrupt or hinder implementation of any air quality plan control measures?
- Does the project support the primary goals of the air quality plan?

The 2017 CAP includes control measures that aim to reduce air pollution and GHGs from stationary, area, and mobile sources. The control measures are organized into nine categories: stationary sources, transportation, buildings, energy, agriculture, natural and working lands, waste, water, and super-GHG pollutants (e.g., methane, black carbon, and fluorinated gases). As described in Table 1, the project would be consistent with applicable control measures from the 2017 CAP. Because the project would not result in any significant and unavoidable air quality impacts related to emissions, ambient concentrations, or public exposures (see subsections b through d below and *Section III.H, Greenhouse Gas Emissions*), the project supports the primary goals of the 2017 CAP. Therefore, based on the BAAQMD's CEQA Air Quality Guidelines, the project would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant.

TABLE 1 PROJECT CONSISTENCY WITH BAAQMD'S 2017 CAP

Control Measures	Project Consistency
Stationary Source	The stationary source measures, which are designed to reduce emissions from stationary sources, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD's Permit and Inspection programs. Since the project would not include any stationary sources, the stationary source control measures of the 2017 CAP are not applicable to the project.
Transportation	The transportation control measures are designed to reduce vehicle trips, use, miles traveled, idling, or traffic congestion for the purpose of reducing vehicle emissions. The project is not expected to result in a substantial increase in vehicle trips. Furthermore, adding a vehicle wash service to an existing gas station with a convenience store and food restaurant allows users to access multiple services at one location rather than making separate trips to different locations for each service. Therefore, the project would be consistent with the goals for transportation control in the 2017 CAP.
Energy	The energy control measures are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the energy control measures of the 2017 CAP are not applicable to the project. However, the project's electricity is supplied PG&E, which supplies 93 percent of its electric power mix from a combination of renewable and GHG-free sources.[a]
Buildings	The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters but has limited authority to regulate buildings themselves. Therefore, the building control measures focus on working with local governments that have authority over local building codes to facilitate adoption of best practices and policies to control GHG emissions. In accordance with the City of Berkeley Natural Gas Prohibition & Reach Code for Electrification, the project would exceed the 2019 Title 24 energy efficiency standards through the construction of an all-electric building (i.e., no natural gas). Therefore, the project would not conflict with any of the Building Control Measures.

TABLE 1 PROJECT CONSISTENCY WITH BAAQMD'S 2017 CAP

Control Measures	Project Consistency
Agriculture	The agriculture control measures are designed to primarily reduce emissions of methane. Since the project does not include any agricultural activities, the agriculture control measures of the 2017 CAP are not applicable to the project.
Natural and Working Lands	The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to ordinances that promote urban-tree plantings. Since the project does not include the disturbance of any rangelands or wetlands, the natural and working lands control measures of the 2017 CAP are not applicable to the project.
Waste Management	The waste management measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The project would comply with local requirements for waste management. Therefore, the project would be consistent with the waste management control measures of the 2017 CAP.
Water	The water control measures to reduce emissions from the water sector will reduce emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Because these measures apply to POTWs and local government agencies (and not individual projects), the water control measures of the 2017 CAP are not applicable to the project.
Super GHGs	The super-GHG control measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Because these measures do not apply to individual projects, the super-GHG control measures of the 2017 CAP are not applicable to the project.

[a] Pacific Gas and Electric (PG&E), 2022. Clean Energy Solutions. Available at: https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page, accessed January 12, 2023.
Source: Bay Area Air Quality Management District (BAAQMD), 2017a, op. cit.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant. The SFBAAB is designated as a nonattainment area for ozone, PM10, and PM2.5. Construction and operation of the project would generate criteria pollutant emissions that could potentially impact regional air quality. The BAAQMD has developed screening criteria for ozone precursors (ROG and NOx) and exhaust PM10 and PM2.5 to conservatively evaluate whether a project would result in a cumulatively considerable net increase in criteria pollutants for which the SFBAAB is non-attainment.[9] For general light industry, the screening criteria for emissions from construction and operation apply to buildings larger than 259,000 square feet and 541,000 square feet, respectively. The proposed vehicle wash building is 960 square feet, which is well below the BAAQMD's screening criteria for criteria air pollutant emissions.

[9] Bay Area Air Quality Management District (BAAQMD), 2017a, op. cit.

Fugitive dust emissions of PM10 and PM2.5 would be generated by soil disturbance activities and demolition. The BAAQMD does not have a quantitative threshold of significance for fugitive dust PM10 and PM2.5 emissions; however, the BAAQMD considers implementation of best management (BMPs) practices to control dust during construction sufficient to reduce potential impacts to a less-than-significant level. The project would comply with **Condition of Approval (COA): Public Works – Implement BAAQMD-Recommended Measures during Construction (#52)** to reduce fugitive dust emissions in accordance with the BAAQMD's recommended BMPs. With implementation of the City's COA, construction of the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Therefore, the air quality impact related to the generation of criteria pollutant emissions during project construction and operation would be less than significant.

Standard Conditions of Approval:

COA: Public Works – Implement BAAQMD-Recommended Measures during Construction (#52). For all proposed projects, BAAQMD recommends implementing all the Basic Construction Mitigation Measures, listed below to meet the best management practices threshold for fugitive dust:

A. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

B. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

C. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

D. All vehicle speeds on unpaved roads shall be limited to 15 mph.

E. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

F. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

G. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.

H. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action

within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant. The project does not include operation of an emergency diesel generator or any other stationary sources of TACs. Therefore, project operations would have no impact on nearby sensitive receptors associated with the exposure to substantial pollutant concentrations.

Project construction would generate DPM and PM2.5 emissions from the exhaust of off-road diesel construction equipment. Construction of the vehicle wash building would require the use of typical diesel-powered construction equipment and would be completed in about three months. In accordance with **COA: Air Quality – Diesel Particulate Matter during Construction (#53),** the project will use off-road equipment with Tier 4 engines or Tier 2 and Tier 3 engines equipped with the most effective VDECS, as defined below (e.g., level III diesel particulate filters). Based on the temporary nature of construction activities and the use of best available control technologies, project construction would not expose sensitive receptors to substantial pollutant concentrations with implementation of the City's COA and the impact would be less than significant.

Standard Conditions of Approval:

COA: Air Quality – Diesel Particulate Matter during Construction (#53). All off-road construction equipment used for projects with construction lasting more than two months shall comply with one of the following measures:

A. The project applicant shall prepare a health risk assessment that demonstrates the project's on-site emissions of diesel particulate matter during construction will not exceed health risk screening criteria after a screening-level health risk assessment is conducted in accordance with current guidance from BAAQMD and OEHHA. The health risk assessment shall be submitted to the City of Berkeley Planning and Development Department, Land Use Division for review and approval prior to the issuance of building permits; or

B. All construction equipment shall be equipped with Tier 2 or higher engines and the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by the California Air Resources Board (CARB). The equipment shall be properly maintained and tuned in accordance with manufacturer specifications.

In addition, a Construction Emissions Minimization Plan (Emissions Plan) shall be prepared that includes the following:

- An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification

number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.

- A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract. The Emissions Plan shall be submitted to the Public Works Department for review and approval prior to the issuance of building permits.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No Impact. Project construction and operation would not be expected to generate significant odors because the project would not include handling or generation of noxious materials. Therefore, the project would have no impact related to other emissions.

D. BIOLOGICAL RESOURCES

Environmental Setting

The project site is located in a developed commercial and residential area. Most of the site is paved and developed with an existing building. Existing landscaping is limited to the edges of the parcel. There are six existing street trees surrounding the project site along the sidewalk.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on State- or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?

No Impact (a through f). The project site is located on a developed property within an urbanized area. There are no known plants or animals of importance on the project site, the site is not part of a riparian habitat or other natural community, nor is it part of a federally protected wetland. According to the City's interactive creek map,[10] the site is not subject to the provisions found in BMC Chapter 17.08 "Preservation and Restoration of Natural Watercourses." There are no Habitat Conservation Plans or other resource plans applicable to the site. The landscape plan identifies three existing trees for removal, none of which qualify for protection under MBC Chapter 6.52, Moratorium on the Removal of Coast Live Oak Trees. Therefore, the project would have no impact on biological resources.

[10] City of Berkeley, 2023. Community GIS Portal. Available at: https://berkeley.maps.arcgis.com/apps/webappviewer/index.html?id=2c7dfafbb1f64e159f4fdf28a52f51c6&, accessed January 12, 2023.

E. CULTURAL RESOURCES

Environmental Setting

Cultural resources are defined as buildings, sites, structures, or objects that may have historic, architectural, archaeological, cultural, or scientific importance. Under CEQA, public agencies must consider the effects of their actions on historical resources, defined by CEQA as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR). The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places. Pursuant to Public Resources Code Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Demolition, replacement, substantial alteration, and relocation of historic properties are actions that would change the significance of an historic resource.

Typically, structures under 50 years of age are not considered historic resources. No evidence of historic buildings, sites, structures, or objects is present on the project site.

Impact Analysis

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☒	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☒	☐
c)	Disturb any human remains, including those interred out-side of formal cemeteries?	☐	☐	☒	☐

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant (a and b). The project site is a developed property in an urbanized area. The project does not include any historic resources as defined by CEQA Guidelines Section 15064.5; it is not on the City's List of Designated Landmarks or Structures of Merits and Historic

Districts.[11] Prehistoric archaeological deposits, should they be located within the project area, may be buried by alluvial soils. For these reasons, while unlikely, ground-disturbing activities associated with new construction and related underground utility installation (including runoff inlet and underground power service routing) could result in the destruction or disturbance of unidentified subsurface archaeological resources, which would be a potentially significant impact. However, the following COA for projects in the City of Berkeley would ensure impacts avoid disturbance to any potential archeological resources:

Standard Conditions of Approval:

COA: Archaeological Resources (#59). Pursuant to CEQA Guidelines Section 15064.5(f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore:

A. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist, historian, or paleontologist to assess the significance of the find.

B. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified professional would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Berkeley. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by the qualified professional according to current professional standards.

C. In considering any suggested measure proposed by the qualified professional, the project applicant shall determine whether avoidance is necessary or feasible in light of factors such as the uniqueness of the find, project design, costs, and other considerations.

D. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation measures for cultural resources is carried out.

E. If significant materials are recovered, the qualified professional shall prepare a report on the findings for submittal to the Northwest Information Center.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant. The potential to discover Native American human remains exists in locations throughout California. The site has been previously developed and other development has occurred around the project area, therefore, discoveries are not expected. Although not

[11] Ibid.

anticipated, previously undiscovered human remains could be identified during site preparations and grading activities. However, the following COA for projects in the City of Berkeley would ensure impacts avoid disturbance to any potential human remains:

Standard Conditions of Approval:

> **COA: Human Remains (#60)**. In the event that human skeletal remains are uncovered at the project site during ground-disturbing activities, all work shall immediately halt, and the Alameda County Coroner shall be contacted to evaluate the remains and follow the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

F. ENERGY

Environmental Setting

California's Building Standards Code (24 CCR) includes two parts 1) the Building Energy Efficiency Standards (Energy Code), Part 6 of Title 24, and 2) the California Green Building Standards (CALGreen Code), Part 11 of Title 24. The Energy Code applies to newly constructed buildings, additions, and alterations.

Within the project area, electricity and natural gas were used historically during operation of the existing facilities. No natural gas will be used in the project. Electricity is currently provided at the site by PG&E.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant (a and b). The project would cause an increased demand for electrical services but would be developed in a location where such services are already being provided with adequate capacity to accommodate the project. The vehicle wash would not contain any features that would result in the wasteful or inefficient usage of energy because it would operate from the hours of 7:00 a.m. to 10:00 p.m. and would not use a significant amount of energy while not in use.

Natural gas infrastructure in new buildings of all types is prohibited pursuant to BMC Chapter 12.80 BMC, Prohibition of Natural Gas Infrastructure in New Buildings. For building energy use, the project is required to comply with BMC Chapter 12.80, pursuant to **COA: Prohibition of Natural Gas Infrastructure in New Buildings (#43)**. The project will not include natural gas appliances or natural gas plumbing and will be all-electric. In accordance with **COA: Exterior Lighting (#83),** all exterior lighting will be energy efficient where feasible. Operation of the proposed vehicle wash would also be automated and power down when not in use. Furthermore,

PG&E, the energy service provider, confirmed that the existing transformer is feasible for the project.[12] Therefore, the project would not be result in wasteful, inefficient, or unnecessary electrical usage.

The GHG reduction policies identified in the City of Berkeley's Climate Action Plan[13] do not directly apply to the proposed project. However, by complying with BMC Chapter 12.80, Prohibition of Natural Gas Infrastructure in New Buildings, this will be an all-electric building and thereby be consistent with, and not hinder, the GHG reduction goals set forth in the Climate Action Plan. For these reasons stated above, the project would result in a less-than-significant impact related to energy consumption and policy.

Standard Conditions of Approval:

COA: Prohibition of Natural Gas Infrastructure in New Buildings (#43). The project shall comply with the City of Berkeley Prohibition of Natural Gas Infrastructure in New Buildings (BMC Chapter 12.80).

COA: Exterior Lighting (#83). All exterior lighting shall be energy efficient where feasible, and shielded and directed downward and away from property lines to prevent excessive glare beyond the subject property.

[12] Anderson, Sean, 2022, op. cit.

[13] City of Berkeley, 2009. Climate Action Plan. June. Available at: https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Climate-Action-Plan.pdf, accessed January 12, 2023.

G. GEOLOGY AND SOILS

Environmental Setting

Berkeley is located on the East Bay Plain (the Plain), a flat area that extends 50 miles from Richmond in the north to San Jose in the south. The Plain is about 3 miles wide in the Berkeley area. At its eastern edge, the Plain transitions into hills, rising to approximately 1,683 feet at Barberry Peak, the highest point in Berkeley's Claremont Hills neighborhood. On its western edge, the Plain slopes down to San Francisco Bay.

Berkeley is located in the United States Geological Survey's (USGS) Richmond and Oakland West Quadrangle 7.5-minute topographic map areas. The area is typified by low topographic relief, with gentle slopes to the west in the direction of San Francisco Bay. By contrast, the Berkeley Hills that lie directly east of Berkeley have more pronounced topographic relief, with elevations that exceed 1,000 feet above mean sea level.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable because of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or unique geologic feature?	☐	☐	☒	☐

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone.[14] Therefore, the project would have no impact on people and structures related to fault rupture.

ii) Strong seismic ground shaking?

Less than Significant. Seismic ground shaking generally refers to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The project site is in a seismically active areas that would likely experience strong to very strong ground shaking during a large earthquake on one of the nearby faults.

The risk of ground shaking impacts is reduced through adherence to the design and materials standards set forth in the California Building Code (CBC) and recommendations in a site-specific geotechnical investigation and/or geotechnical report (which is required by the Seismic Hazards Mapping Act and City of Berkeley General Plan). The 2019 CBC provides for stringent construction requirements on projects in areas of high seismic risk. The seismic design standards of the 2019 CBC are intended to prevent catastrophic building failure in the most severe earthquakes currently anticipated. Therefore, compliance with the existing building codes, described above, would ensure that potential impacts related to seismic ground shaking would be reduced to the extent feasible and this impact is considered less than significant.

[14] California Department of Conservation, 2021. Earthquake Zones of Required Investigation Map. Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed January 12, 2023.

iii) Seismic-related ground failure, including liquefaction?

No Impact. The potential for different types of seismic-related ground failure to occur at the project site is discussed below.

Liquefaction

The project site is not located within a CGS-designated Liquefaction Hazard Zone.[15] Therefore, the project would have no impact related to liquefaction.

Lateral Spreading

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. In a lateral spread failure, a layer of ground at the surface is carried on an underlying layer of liquefied material over a nearly flat surface toward a river channel or other bank. The lateral spreading hazard tends to mirror the liquefaction hazard for a site (assuming a free face is located nearby). There would be no impacts related to lateral spreading because the project site is relatively flat and there are no slopes or free faces on or adjacent to the project site.

iv) Landslides?

No Impact. The project site is relatively flat and is not located within a Seismic Hazard Zone for seismically induced landslides.[16] Therefore, no impacts related to landslides would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant. The topography of the project site and surroundings is relatively level, which reduces the likelihood of erosion. Soil erosion, which is discussed in detail below in *Section III.J, Hydrology and Water Quality*, could occur during project grading and construction. As described in *Section III.J, Hydrology and Water Quality*, compliance with the City's COAs (#64, 65, 66, 67, and 68) related to water quality and stormwater protection during construction would ensure that the project would have a less-than-significant impact related to erosion or the loss of topsoil. In particular, **COA: Public Works (#68)** requires the project sponsor to prepare an erosion prevention plan, which must be approved by the City, for any soil disturbance activities during the rainy season. During operation of the project, the project site would be covered with buildings, pavement surfaces, and landscaping, which would minimize post-development erosion. Therefore, the potential impacts related to substantial erosion or loss of topsoil would be less than significant.

[15] California Department of Conservation, 2021, op. cit.
[16] Ibid.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant. As previously discussed in subsection a, above, potential hazards related to unstable soil including liquefaction, lateral spreading, and landslides are not a concern for the project site due to the cohesion and density of the soil and the flat topography of the area.

Subsidence or collapse can result from the removal of subsurface water resulting in either catastrophic or gradual depression of the surface elevation of the project site. Temporary dewatering from excavations could be necessary during construction. However, the temporary dewatering of excavations (if needed) would be the only removal of subsurface water associated with the proposed project, and would be temporary, localized, and of relatively low magnitude. Additionally, land subsidence generally does not occur in response to declines in shallow groundwater;[17] therefore, potential impacts related to subsidence or soil collapse would be less than significant.

Consolidation (or static settlement) of soils is a process by which the soil volume decreases as water is expelled from saturated soils or loose compressible soils consolidate under static loads. As the water moves out from the pore space of the soil, the solid particles realign into a denser configuration which results in settlement. Consolidation typically occurs from new buildings or fill materials being placed over compressible soils. Compliance with the mandatory building code structural specifications would ensure that potential impacts related to consolidation would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant. Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume. According to previous soil boring logs prepared for the project site during the installation of groundwater monitoring wells, silty clay is present in the subsurface.[18] The 2019 CBC identifies the maximum allowable load-bearing values to be used in building design based on the strength or compressibility of various soil classifications, such as clayey soils. Therefore, compliance with the existing building codes would ensure that potential

[17] East Bay Municipal Utility District (EBMUD), Groundwater Sustainability Agency (GSA) and City of Hayward, Groundwater Sustainability Agency, 2022. East Bay Plan Subbasin, Groundwater Sustainability Plan. January. Available at: https://www.ebmud.com/water/about-your-water/water-supply/groundwater-sustainability-agencies/east-bay-plain-subbasin-gsp-documents, accessed January 12, 2023.

[18] Groundwater Technology, 1993. Drilling Log MW-6 to MW-10. July.

impacts related to expansive soils would be reduced to the extent feasible and this impact is considered less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project would not involve the use of septic tanks or alternative wastewater disposal systems; therefore, no impact would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant. There are no unique geologic features at the project site and there is no evidence or previous findings of paleontological resources in the vicinity of the project site.[19] However, demolition, site preparation, and construction activities associated with the proposed project could adversely impact previously unidentified fossils. Such paleontological resources, if present, could be identified during excavation. Development projects that require a use permit are required to comply with **COA: Paleontological Resources (#61)**. Implementation of this COA would ensure that this impact would be less than significant.

Standard Conditions of Approval:

> **COA: Paleontological Resources (#61).** (Ongoing throughout demolition, grading, and/or construction). In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards [SVP 1995, 1996]). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.

[19] City of Berkeley, 1993. West Berkeley Plan Final Environmental Impact Report. October. Available at: https://berkeleyca.gov/sites/default/files/2022-03/12_14_1993%3B%20CLK%20-%20Resolution%3B%20City%20Council%3B%2057301%3B%20West%20Berkeley%20Area%20Plan%3B.pdf, accessed January 12, 2023.

H. GREENHOUSE GAS EMISSIONS

Environmental Setting

The proposed site is located in the City of Berkeley in Alameda County. The primary source of GHG within the city is from the transportation sector, representing approximately 60 percent of citywide GHG emissions. Other sources of GHG emissions include:[20]

- Natural gas residential (approximately 17 percent)
- Natural gas commercial (approximately 15 percent)
- Landfill waste (approximately 3 percent)
- Electricity commercial (approximately 3 percent)
- Electricity residential (approximately 2 percent)
- Municipal buildings (approximately 0.3 percent)
- Water consumption and wastewater (approximately 0.3 percent)

Impact Analysis

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Climate change refers to change in the Earth's weather patterns, including the rise in temperature due to an increase in heat-trapping GHGs in the atmosphere. According to CARB, some of the potential effects of increased GHG emissions and the associated climate change may include loss in snowpack (affecting water supply), sea level rise, more frequent extreme weather events, more large forest fires, and more drought years. In addition, climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health.[21]

The primary GHG emissions of concern are carbon dioxide, methane, and nitrous oxide. Other GHGs of concern include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, but their

[20] City of Berkeley, 2022. Climate Action Plan Report. February 8. Available at: https://berkeleyca.gov/sites/default/files/2022-05/February%208%202022%20CAP%20Workshop_Slides_final_0.pdf, accessed January 19, 2023.

[21] California Air Resources Board (CARB), 2017. California's 2017 Climate Change Scoping Plan. January 20. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf, accessed January 13, 2023.

contribution to climate change is less than 1 percent of the total GHGs that are well mixed (i.e., that have atmospheric lifetimes long enough to be homogeneously mixed in the troposphere).[22] Each GHG has a different global warming potential. As a result, emissions of GHGs are reported in metric tons of carbon dioxide equivalents (CO_2e), where each GHG is weighted by its global warming potential compared to carbon dioxide. Carbon dioxide emissions dominate the GHG inventory in the SFBAAB, accounting for more than 90 percent of the total CO_2e emissions reported.

For the State of California, Executive Order S-3-05 issued in 2005 set a GHG reduction goal of 80 percent below 1990 levels by 2050. The California State Legislature passed the California Global Warming Solutions Act (AB 32) in 2006, which requires the CARB to develop and implement regulatory and market mechanisms that will reduce GHG emissions to 1990 levels by 2020. In December 2008, CARB adopted the Scoping Plan, which outlines a statewide strategy to achieve AB 32 goals.[23] In 2016, the state legislature adopted Senate Bill (SB) 32, which requires further reduction of GHG emissions to 40 percent below the 1990 level by 2030. In 2017, CARB updated the Scoping Plan to identify measures to meet the 2030 target and adopted the revised Scoping Plan (2017 Scoping Plan).[24] In 2018, Executive Order B-55-18 set a statewide target to achieve carbon neutrality no later than 2045.

The project is in the SFBAAB, which is under the jurisdiction of BAAQMD. BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant. Construction activities could generate GHG emissions from several sources, such as the operation of on-site heavy construction equipment and off-site construction vehicle trips, and worker commute trips. BAAQMD does not recommend a threshold of significance for GHG emissions during construction because there is not sufficient evidence to determine a level at which temporary construction emissions are significant. A construction contractor would also have no incentive to waste fuel during construction and, therefore, it is generally assumed that GHG emissions during construction would be minimized to the maximum

[22] Intergovernmental Panel on Climate Change, 2013. Climate Change 2013, the Physical Science Basis. Available at: https://www.ipcc.ch/site/assets/uploads/2018/03/WG1AR5_SummaryVolume_FINAL.pdf, accessed January 13, 2023.

[23] California Air Resources Board (CARB), 2008. Climate Change Scoping Plan. December. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf, accessed January 13, 2023.

[24] California Air Resources Board (CARB), 2017, op. cit.

extent feasible. Furthermore, implementation of **COA: Public Works – Implement BAAQMD-Recommended Measures during Construction (#52)** (see *Section III.C, Air Quality*) will limit the idling times for off-road construction equipment to five minutes to reduce emissions from diesel-fueled vehicles. Therefore, GHG emissions from construction of the project would have a less-than-significant impact on the environment.

On April 20, 2022, BAAQMD adopted updated CEQA thresholds of significance for evaluating GHG emissions during operation of typical land use development projects, such as residential and commercial buildings.[25] The intent of the new thresholds is to identify design elements that an individual project would need to incorporate to do its "fair share" in achieving the State's goals to reduce GHG emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.

According to the BAAQMD's updated GHG thresholds, projects must include, at a minimum, the following project design elements:

1. Buildings
    a) The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
    b) The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the CEQA Guidelines.

2. Transportation
    a) Achieve compliance with EV requirements in the most recently adopted version of CALGreen Tier 2.
    b) Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
        i. Residential projects: 15 percent below the existing VMT per capita
        ii. Office projects: 15 percent below the existing VMT per employee
        iii. Retail projects: no net increase in existing VMT

Natural gas infrastructure in new buildings of all types is prohibited pursuant to BMC Chapter 12.80 BMC, Prohibition of Natural Gas Infrastructure in New Buildings. For building energy use, the project is required to comply with BMC 12.80, per **COA: Prohibition of Natural Gas**

[25] Bay Area Air Quality Management District (BAAQMD), 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Project and Plans. April. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en, accessed February 1, 2023.

Infrastructure in New Buildings (#43). The project will not include natural gas appliances or natural gas plumbing.

The project is not expected to result in a substantial net increase in vehicle trips, if any. The project may potentially even reduce VMT, because adding a vehicle wash service to an existing gas station with a convenience store and food restaurant allows users to access multiple services at one location rather than making separate trips to different locations for each service. Therefore, the project would not result in a net increase in regional VMT.

Overall, the project includes design elements that are generally consistent with the BAAQMD's updated thresholds. Therefore, the project will contribute its "fair share" to achieve the State's climate goals and have a less-than-significant impact on the environment.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant. Because the GHG emissions from the project would be below the BAAQMD's updated threshold, it can be assumed that the project is consistent, and not in conflict, with SB 32 and the 2017 Scoping Plan.

The City of Berkeley created and adopted the Climate Action Plan in 2009 to implement measures to reduce GHG emissions and adapt to climate change.[26] The 2009 Climate Action Plan sets the target of reducing the City of Berkeley's GHG emissions by 33 percent below the 2000 levels by 2020, and by 80 percent below the 2000 levels by 2050. The Climate Action Plan includes detailed recommendations for sustainable transportation and land use, building energy use, waste reduction and recycling, community outreach and empowerment, and preparing for climate change impacts. In addition, the City of Berkeley has added climate goals to support the implementation of the 2009 Climate Action Plan. In 2018, the City of Berkeley adopted a resolution establishing the goal of becoming a fossil fuel-free city and a Climate Emergency Declaration. In 2021, the City adopted a resolution to commit to the C40 Race to Zero Campaign and to achieve net-zero carbon emissions no later than 2045. The City of Berkeley has adopted the 2019 California Green Building Code and California Energy Code, with local amendments.

The GHG reduction policies identified in the City's Climate Action Plan do not directly apply to the project. However, by complying with the BMC Chapter 12.80, Prohibition of Natural Gas Infrastructure in New Buildings, this will be an all-electric building and thereby be consistent with, and not hinder, the GHG reduction goals set forth in the Climate Action Plan.

Overall, the project would not conflict with applicable GHG plans, policies or regulations and this impact would be less than significant.

[26] City of Berkeley, 2009, op. cit.

I. HAZARDS AND HAZARDOUS MATERIALS

Environmental Setting

The project is located within the City's Environmental Management Area (EMA).[27] These areas in the city are known or suspected to have groundwater contamination. The project site has operated as a Chevron-branded service station since at least the mid-1980's. An auto repair facility was located on the northern portion of the property before being demolished circa 2019. In 1987, a release of petroleum hydrocarbons from leaking underground storage tanks was reported at the project site during the renovation of the station building and dispenser islands. In 1994, three extraction wells (EW-1 through EW-3) were installed along the west boundary of the site as part of a groundwater extraction system designed to control off-site petroleum hydrocarbon migration.[28] On June 21, 2022, the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) approved a Low-Threat-Closure Request for the subject property.[29] In accordance with the Regional Water Boards Case Closure requirements, all wells and borings installed for the purpose of investigating, remediating, or monitoring the unauthorized release will be properly destroyed in early 2023. The petroleum release is limited to the soil and shallow groundwater and any remaining petroleum hydrocarbon constituents do not pose a significant risk to human health, safety, or the environment under current conditions.[30]

Impact Analysis

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

[27] City of Berkeley, 2022. City of Berkeley Community GIS Portal. Available at: https://berkeley.maps.arcgis.com/apps/webappviewer/index.html?id=2c7dfafbb1f64e159f4fdf28a52f51c6&showLayers=Berkeley%20Parcels;Environment, accessed February 1, 2023.

[28] State Water Resources Control Board, 2022. GeoTracker Case Summary: Chevron Service Station (T0600194038), 2996 Telegraph Ave Berkeley, CA 94704. https://geotracker.waterboards.ca.gov/profile_report?global_id=T0600194038, accessed February 1, 2023.

[29] Regional Water Quality Control Board, 2022. Email Correspondence between John Jang and Bradley Rogers regarding the Chevron Station, 2996 Telegraph Avenue, Berkeley - Approve Closure Request & Request for Interested Parties List and Case Closure Summary. December 20.

[30] State Water Resources Control Board, 2022. Review Summary Report – Concur with Closure, Fourth Review – September 2022.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?	☐	☐	☒	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant. The project proposes the construction of an automated vehicle wash, installation of two EV charging stations, and associated site improvements (landscaping and revisions to parking stripping). These types of proposed land uses would generally not involve transport, use, or disposal of significant quantities of hazardous materials.

The vehicle wash proposes implementation of a reclaim system to facilitate recycling efforts of discharge rinse water from vehicle wash operations. An inlet will be installed at the vehicle wash slab to collect runoff route it through two 1,500-gallon reclaim tanks. The reclaim tanks will route the drainage through a system of baffle sections which allows the drainage to collect prior being conveyed to the next baffle area. This process allows discharge to separate contributing debris and solid particles to settle to the bottom of the tank and oils float to the top where they are trapped within the system. The final baffle section contains two 2-inch suction lines which pump treated water back to the reclaim system for reuse. Excess discharge will be released from the system to the public sewer. Settled solids and floating oils are periodically extracted (typically every three to six months) directly from the tank system via manual pumping and maintenance efforts. No secondary contamination is anticipated. Design of the reclaim tank system will be included during construction permitting efforts.

The cleaning detergents used for the vehicle wash would be non-hazardous. Small quantities of hazardous materials such as paints and cleaning products would be used for routine

maintenance. The vehicle wash requires 45 gallons of Alkaline Presoak and 45 gallons of Low PH Presoak to be stored on-site. On-site use of presoak detergents requires an updated Hazardous Materials Business Plan (HMBP) to be registered with the City of Berkeley Toxics Management Division (TMD), which is the Certified Unified Program Agency (CUPA) for the City.

During project construction, hazardous materials such as fuel, lubricants, paint, sealants, and adhesives would be transported and used at the project site. The routine transport, use, or disposal of these hazardous materials would not pose a significant hazard to the public or environment unless the hazardous materials were accidentally spilled or released into the environment, as discussed in sub-section b), below.

As noted above, all uses of hazardous materials during operation of the project site would be subject to existing regulatory programs for hazardous materials. The updated HMBP, in compliance with BMC Section 15.12.040, must be submitted to the TMD within 30 days if on-site hazardous materials exceed in aggregate any of the following: 55 gallons for liquids; 500 pounds for solids; or 200 cubic feet of gases at standard temperature and pressure. This requirement is described in **COA: Toxics (#25)**, below.

Worker health and safety is regulated at the federal level by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). OSHA regulations include training requirements for construction workers and a requirement that hazardous materials are accompanied by manufacturer's Safety Data Sheets (SDSs). The Federal Occupational Safety and Health Act of 1970 authorizes states to establish their own safety and health programs with OSHA approval. Worker health and safety protections in California are regulated by the California Department of Industrial Relations (DIR). The DIR includes the Division of Occupational Safety and Health (DOSH), which acts to protect workers from safety hazards through its California OSHA (Cal/OSHA) program. Cal/OSHA regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. California standards for workers dealing with hazardous materials are contained in CCR Title 8 and include practices for all industries (General Industrial Safety Orders), and specific practices for construction, and other industries.

In 1990 and 1994, the federal Hazardous Material Transportation Act was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The U.S. Department of Transportation (USDOT) developed hazardous materials regulations, which govern the classification, packaging, communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting. The transportation of hazardous materials is subject to USDOT, Resource Conservation and Recovery Act (RCRA), and State regulations. The California Highway Patrol, the California Department of Transportation (Caltrans), and the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

Construction of the proposed project would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that may be classified as hazardous waste. Hazardous wastes would be required to be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by DOT, RCRA, and State regulations.

Compliance with the regulations described above, including BMC Section 15.12.040, OSHA and Cal/OSHA regulations, CCR Title 8, DOT, RCRA, and State regulations, would ensure that the proposed project would not create a significant hazard to the public or the environment associated with the routine transport, use, or disposal of hazardous materials by ensuring that these materials are properly handled during construction and operation of the project. Therefore, this impact would be less than significant.

Standard Conditions of Approval:

COA Toxics (#25). The applicant shall contact the TMD at 1947 Center Street or (510) 981-7470 to determine which of the following documents are required and timing for their submittal:

a. Environmental Site Assessments:

1) Phase I & Phase II Environmental Site Assessments (latest ASTM 1527-13). A recent Phase I ESA (less than 2 years old) shall be submitted to TMD for developments for:

- All new commercial, industrial and mixed-use developments and all large improvement projects.
- All new residential buildings with five or more dwelling units located in the Environmental Management Area (EMA).
- EMA is available online at: http://www.cityofberkeley.info/uploadedFiles/IT/Level_3_-_General/ema.pdf

2) Phase II ESA is required to evaluate Recognized Environmental Conditions (REC) identified in the Phase I or other RECs identified by TMD staff. The TMD may require a third-party toxicologist to review human or ecological health risks that may be identified. The applicant may apply to the appropriate State, regional or County cleanup agency to evaluate the risks.

3) If the Phase I is over two years old, it will require a new site reconnaissance and interviews. If the facility was subject to regulation under Title 15 of the Berkeley Municipal Code since the last Phase I was conducted, a new records review must be performed.

b. Soil and Groundwater Management Plan:

1) A Soil and Groundwater Management Plan (SGMP) shall be submitted to TMD for all non-residential projects, and residential or mixed-use projects with five or more dwelling units, that: (1) are in the EMA and (2) propose any excavations deeper than 5 feet below grade. The SGMP shall be site specific and identify procedures for soil and groundwater management including identification of pollutants and disposal methods. The SGMP will identify permits required and comply with all applicable local, State, and regional requirements.

2) The SGMP shall require notification to TMD of any hazardous materials found in soils and groundwater during development. The SGMP will provide guidance on managing odors during excavation. The SGMP will provide the name and phone number of the individual responsible for implementing the SGMP and post the name and phone number for the person responding to community questions and complaints.

3) TMD may impose additional conditions as deemed necessary. All requirements of the approved SGMP shall be deemed conditions of approval of this Use Permit.

c. Building Materials Survey:

1) Prior to approving any permit for partial or complete demolition and renovation activities involving the removal of 20 square or lineal feet of interior or exterior walls, a building materials survey shall be conducted by a qualified professional. The survey shall include, but not be limited to, identification of any lead-based paint, asbestos, polychlorinated biphenyl (PCB) containing equipment, hydraulic fluids in elevators or lifts, refrigeration systems, treated wood and mercury containing devices (including fluorescent light bulbs and mercury switches). The Survey shall include plans on hazardous waste or hazardous materials removal, reuse, or disposal procedures to be implemented that fully comply state hazardous waste generator requirements (22 California Code of Regulations 66260 et seq). The Survey becomes a condition of any building or demolition permit for the Project. Documentation evidencing disposal of hazardous waste in compliance with the survey shall be submitted to TMD within 30 days of the completion of the demolition. If asbestos is identified, Bay Area Air Quality Management District Regulation 11-2-401.3 a notification must be made, and the J number must be made available to the City of Berkeley Permit Service Center.

d. Hazardous Materials Business Plan:

1) An HMBP in compliance with BMC Section 15.12.040 shall be submitted electronically at http://cers.calepa.ca.gov/ within 30 days if on-site hazardous materials exceed BMC 15.20.040. HMBP requirement can be found at http://ci.berkeley.ca.us/hmr/.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant. As described above, the proposed project is located within the City's EMA.[31] Construction activities that would involve the disturbance of soil and groundwater could exacerbate any residual hazardous materials conditions at the project site and potentially result in the release of hazardous materials into the environment in the form of vapors, dust, or dewatering discharges if contaminated soil and groundwater are encountered and not managed appropriately. However, development projects that require a use permit are required to comply with **COA: Toxics (#25)** that addresses these potential impacts (see sub-section a), above).

Part "a" of **COA: Toxics (#25)** requires the preparation of a Phase I Environmental Site Assessment (ESA) to identify potential contaminants of concern in soil, soil gas, and groundwater that could be encountered during project construction and operation. If potential contaminants of concern are identified, a Phase II ESA must be prepared to evaluate the potential extent and magnitude of contamination by collecting and analyzing samples of the potentially contaminated media, and to evaluate the associated health risks posed to people and the environment. In accordance with this COA, TMD should be contacted to determine if recent Phase I/II ESA reports prepared for the project site and ongoing groundwater monitoring activities adequately address this requirement.

Part "b" of **COA: Toxics (#25)** requires preparation of a Soil and Groundwater Management Plan (SGMP) that identifies procedures for managing contaminated soil and groundwater during project construction. The SGMP should incorporate the findings of the most recent Phase I/II ESA reports prepared for the project site. Implementation of a SGMP will ensure that any contamination encountered in the subsurface is properly managed.

Implementation of a Phase I/II ESA (if needed) and preparation and implementation of a SGMP under the oversight of the TMD, as required by **COA: Toxics (#25)**, will ensure that appropriate soil and groundwater management procedures are used to avoid an accidental release of hazardous materials into the environment due to subsurface contamination. With the implementation of **COA: Toxics (#25)**, potential impacts related to the accidental release of hazardous materials into the environment due to potential subsurface contamination would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?

Less than Significant. Sylvia Mendez Elementary School, located at 2840 Ellsworth Street in Berkeley, is less than 0.25 miles northwest of the project site. Compliance with federal, State, and

[31] City of Berkeley, 2022, op. cit.

local regulations for the management of hazardous materials, as discussed in subsection a, above; and compliance with **COA: Toxics (#25)**, as discussed in subsections a and b, above, would ensure that potential impacts to nearby schools associated with hazardous materials emissions from the project site would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant. Government Code Section 65962.5 requires the DTSC, the State Water Resources Control Board, the California Department of Health Services, and the California Department of Resources Recycling and Recovery (formerly the California Integrated Waste Management Board) to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground storage tank (LUST) sites, and/or hazardous materials releases to the Secretary of Cal/EPA. The project site is located on a LUST site with an active groundwater remediation system.[32] Compliance with **COA: Toxics (#25)**, as discussed in sub-sections a and b, above, would ensure that potential impacts related to being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 are less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project site is not located within a public airport land use plan or within 2 miles of a public use airport.[33] The nearest airport, Oakland International Airport, is located approximately 10 miles south of the project site. Therefore, the project would not result in a safety hazard to people working or residing in the area due to the proximity of an airport.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant. The project would be consistent with the policies contained in the City of Berkeley General Plan's Disaster Preparedness and Safety Element.[34] Telegraph Avenue and Ashby Avenue are the designated emergency access and evacuation routes in the project area. The project would not alter the existing roadway network along Telegraph Avenue and Ashby

[32] State Water Resources Control Board, 2022, op. cit.

[33] Alameda County Community Development Agency, 2010. Oakland International Airport, Airport Land Use Compatibility Plan. December. Available at: https://www.acgov.org/cda/planning/generalplans/documents/OAK_ALUCP_122010_FULL.pdf, accessed January 12, 2023.

[34] City of Berkeley, 2001. Disaster Preparedness and Safety Element. Available at: https://berkeleyca.gov/sites/default/files/documents/07_Disaster%20Preparedness%20and%20Safety%20Element-FINAL_0.pdf, accessed January 12, 2023.

Avenue. Therefore, the project would not be expected to impair the function of nearby emergency evacuation routes and would have a less-than-significant impact on implementation of an adopted emergency response plan or emergency evacuation plan.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The project site is in an urban area and is not within a Very High Fire Hazard Severity Zone.[35] Therefore, the project would not expose people or structures to a significant loss, injury or death involving wildland fires.

[35] CAL FIRE, 2008. CAL FIRE Fire Hazard Severity Zones in LRA – Berkeley. September 3. Available at: https://osfm.fire.ca.gov/media/5604/berkeley.pdf, accessed January 12, 2023.

J. HYDROLOGY AND WATER QUALITY

Environmental Setting

The project area is located on an existing developed parcel in an urban setting. The project site is approximately 0.86 acres (37,327 square feet) and is mostly covered in pavement with some landscaping areas around the site's perimeter. There are no waterways, drainages, or other surface water features bisecting the project area, or adjacent roadside drainages present. The project is located within the Cerrito Creek-Frontal San Francisco Bay Estuaries hydrologic unit, within the larger Central Basin of the San Francisco Bay Basin.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on or off site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	☐	☐	☐	☒
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant. Pollutants of concern during construction include sediments, trash, concrete waste (dry and wet), petroleum products, and other chemicals typically used in construction. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, oils and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via storm water runoff into receiving waters (i.e., the Berkeley Aquatic Park and Central San Francisco Bay).[36]

Compliance with the City's COAs, as outlined below, including incorporation of construction BMPs to target and reduce pollutants of concern in stormwater runoff, would ensure that potential impacts related to violation of waste discharge requirements and water quality standards and degradation of water quality during construction would be less than significant.

Recent groundwater monitoring activities at the project site indicate that groundwater is approximately 5 feet below ground surface.[37] As a result, dewatering from excavations could be required during construction. Improper management and discharge of dewatering effluent could adversely affect water quality because contaminants and sediment may be present in the dewatering effluent.

Groundwater dewatering effluent could be discharge to the sanitary sewer, subject to East Bay Municipal Utility District (EBMUD) permit requirements, which would ensure that discharge standards are met through permit requirements for dewatering effluent testing and treatment. Groundwater could also be discharged to the storm drain system; however, the discharger would be required to prepare a Report of Waste Discharge, and if approved by the Regional Water Board, be issued site-specific waste discharge requirements (WDRs) under NPDES regulations. Site-specific WDRs contain rigorous monitoring requirements and performance standards that, when implemented, ensure that receiving water quality is not substantially degraded.

As discussed in *Section III.I, Hazards and Hazardous Materials* above, groundwater beneath the project site may still be contaminated with residual petroleum hydrocarbons from the cleanup of leaking underground storage tanks. In accordance with **COA: Toxics (#25)**, the Toxics

[36] Sowers, Janet M., 1993. Creek and Watershed Map of Oakland and Berkeley, Potter/Derby Creeks Watershed Map. The Oakland Museum of California. Available at: https://explore.museumca.org/creeks/1150-OMPotterDerby.html, accessed January 12, 2023.

[37] Arcadis, 2022. Semi-Annual Status Report, Second Half 2021, Chevron Service Station 90972, 2996 Telegraph Avenue, Berkeley, CA, January 17.

Management Division (TDM) will require preparation and implementation of a SGMP that identifies procedures for groundwater management. Compliance with the City of Berkeley requirements would ensure that contaminated groundwater is not discharged to surface water. Therefore, potential groundwater dewatering impacts related to violation of waste discharge requirements and water quality standards and degradation of water quality would be less than significant.

Infiltration of stormwater has the potential to affect groundwater quality in areas of shallow groundwater. Proposed construction BMPs, as required by **COA: Stormwater Requirements (#64)**, would reduce infiltration of pollutants to groundwater during construction. Therefore, project construction would not substantially degrade groundwater quality and this impact would also be less than significant.

Operation of the vehicle wash would involve the use of chemical detergents and approximately 28 gallons of water per car. For each car, about 15 gallons of rinse water will be utilized from the on-site reclaim system and 13 gallons of potable water will be used. Overall, 6 gallons of rinse water will be lost to evaporation and carry out, and about 7 gallons of the rinse water will be discharged to the sewer system.

The vehicle wash proposes implementation of a reclaim system to facilitate recycling efforts of discharge rinse water from vehicle wash operations. An inlet will be installed at the vehicle wash slab to collect runoff route it through two 1,500-gallon reclaim tanks. The reclaim tanks will route the drainage through a system of baffle sections which allows the drainage to collect prior being conveyed to the next baffle area. This process allows discharge to separate contributing debris and solid particles to settle to the bottom of the tank and oils float to the top where they are trapped within the system. The final baffle section contains two 2-inch suction lines which pump treated water back to the reclaim system for reuse. Excess discharge will be released from the system to the public sewer. Settled solids and floating oils are periodically extracted (typically every three to six months) directly from the tank system via manual pumping and maintenance efforts. No secondary contamination is anticipated. Design of the reclaim tank system will be included during construction permitting efforts.

Compliance with the City's COAs would ensure that the project's impacts related to violation of waste discharge requirements and water quality standards and degradation of water quality would be less than significant during project construction and operation.

Standard Conditions of Approval:

> **COA: Stormwater Requirements (#64).** The applicant shall demonstrate compliance with the requirements of the City's National Pollution Discharge Elimination System (NPDES) permit as described in BMC Section 17.20. The following conditions apply:

A. The project plans shall identify and show site-specific BMPs appropriate to activities conducted on-site to limit to the maximum extent practicable the discharge of pollutants to the City's storm drainage system, regardless of season or weather conditions.

B. Trash enclosures and/or recycling area(s) shall be covered; no other area shall drain onto this area. Drains in any wash or process area shall not discharge to the storm drain system; these drains should connect to the sanitary sewer. Applicant shall contact the City of Berkeley and EBMUD for specific connection and discharge requirements. Discharges to the sanitary sewer are subject to the review, approval, and conditions of the City of Berkeley and EBMUD.

C. Landscaping shall be designed with efficient irrigation to reduce runoff, promote surface infiltration, and minimize the use of fertilizers and pesticides that contribute to stormwater pollution. Where feasible, landscaping should be designed and operated to treat runoff. When and where possible, xeriscape and drought tolerant plants shall be incorporated into new development plans.

D. Design, location, and maintenance requirements and schedules for any stormwater quality treatment structural controls shall be submitted to the Department of Public Works for review with respect to reasonable adequacy of the controls. The review does not relieve the property owner of the responsibility for complying with BMC Chapter 17.20 and future revisions to the City's overall stormwater quality ordinances. This review shall be [sic] conducted prior to the issuance of a Building Permit.

E. All paved outdoor storage areas must be designed to reduce/limit the potential for runoff to contact pollutants.

F. All on-site storm drain inlets/catch basins must be cleaned at least once a year immediately prior to the rainy season. The property owner shall be responsible for all costs associated with proper operation and maintenance of all storm drainage facilities (pipelines, inlets, catch basins, outlets, etc.) associated with the project, unless the City accepts such facilities by Council action. Additional cleaning may be required by City of Berkeley Public Works Engineering Dept.

G. All private or public projects that create and/or replace 10,000 square feet or more of impervious surface must comply with Provision C.3 of the Alameda County NPDES permit and must incorporate stormwater controls to enhance water quality. Permit submittals shall include a Stormwater Requirement Checklist and detailed information showing how the proposed project will meet Provision C.3 stormwater requirements, including a) Site design measures to reduce impervious surfaces, promote infiltration, and reduce water quality impacts; b) Source Control Measures to keep pollutants out of stormwater runoff; c) Stormwater treatment measures that are hydraulically sized to remove pollutants from stormwater; d) an Operations and Maintenance agreement for all stormwater treatment devices and installations; and e) Engineering calculations for all stormwater devices (both mechanical and biological).

H. All on-site storm drain inlets must be labeled "No Dumping – Drains to Bay" or equivalent using methods approved by the City.

I. Most washing and/or steam cleaning must be done at an appropriately equipped facility that drains to the sanitary sewer. Any outdoor washing or pressure washing must be managed in such a way that there is no discharge or soaps or other pollutants to the storm drain. Sanitary connections are subject to the review, approval, and conditions of the sanitary district with jurisdiction for receiving the discharge.

J. Sidewalks and parking lots shall be swept regularly to prevent the accumulation of litter and debris. If pressure washed, debris must be trapped and collected to prevent entry to the storm drain system. If any cleaning agent or degreaser is used, wash water shall not discharge to the storm drains; wash waters should be collected and discharged to the sanitary sewer. Discharges to the sanitary sewer are subject to the review, approval, and conditions of the sanitary district with jurisdiction for receiving the discharge.

K. The applicant is responsible for ensuring that all contractors and sub-contractors are aware of and implement all stormwater quality control measures. Failure to comply with the approved construction BMPs shall result in the issuance of correction notices, citations, or a project stop work order.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant. The City of Berkeley is located within the Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin, which encompasses approximately 122 square miles in Alameda and Contra Costa counties. The East Bay Plain Subbasin generally extends from north to south from the San Pablo Bay to the Niles Cone Groundwater Basin near Hayward. A substantial amount of artificial fill (thicknesses ranging from 1 to 50 feet) has been placed within the basin, with thickest deposits found nearer to San Francisco Bay. Historical groundwater levels in the East Bay Plain Subbasin have varied between 10 to 140 feet below mean sea level; however, levels have been rising continuously since the 1950s.[38]

Based on recent groundwater monitoring reports, groundwater may be present as shallow as approximately 5 feet below the existing ground surface,[39] therefore dewatering from certain areas of excavation could be necessary during construction. Such dewatering would be localized and temporary and would not result in the lowering of surrounding groundwater levels.

[38] California Department of Water Resources. 2004. California's Groundwater Bulletin 118 – Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin. February 27. Available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/2_009_04_East-BayPlainSubbasin.pdf, accessed January 12, 2023.

[39] Arcadis, 2022, op. cit.

Water supply to the proposed project would be provided by the EBMUD water system, which is supplied from the Mokelumne River.[40] Because EBMUD does not use groundwater from the East Bay Plain Subbasin for municipal water supply, water use during operation of the proposed project would not affect groundwater. Development of the project would not result in a net increase in impervious surfaces on the project site and would reduce the amount of impervious area from 6,544 square feet to 5,488 square feet (a net reduction of 1,034 square feet). Therefore, the project would not affect groundwater recharge. For the reason listed above, impacts related to the decrease of groundwater supplies or interference with groundwater recharge would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

i) result in substantial erosion or siltation on- or off-site;

Less than Significant. The proposed project would not alter the course of a stream or a river. Site preparation and grading and excavation activities may slightly and temporarily alter on-site drainage; however, the existing drainage patterns would generally be maintained and would not be substantially altered or modified. The concrete slabs that facilitate ingress and egress to the vehicle wash facility, which are open to rainfall, will be graded away from the building structure to ensure rainfall does not enter the interior inlet. During construction, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. Compliance with the **COA: Stormwater Requirements (#64 through #68),** which requires approval and implementation of an erosion prevention plan, would ensure that potential impacts related to erosion and siltation would be less than significant.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

No Impact. The project would not increase the amount of impervious surface area on the project site and rinse water not reclaimed by the vehicle wash would be discharged to the sewer system. Therefore, the project would have no potential impacts related to on- or off-site flooding related to an increase in runoff from the project site.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less than Significant. As discussed above, the project would not increase the amount of impervious surface area on the project site and rinse water not reclaimed by the vehicle wash

[40] East Bay Municipal Utility District (EBMUD), 2023. Water Supply. Available at: www.ebmud.com/water/about-your-water/water-supply, accessed January 12, 2023.

would be discharged to the sewer system. Therefore, the project would have no potential impacts related to runoff from the project site exceeding the capacity of existing or planned stormwater drainage systems. As discussed under subsection a, above, compliance with the requirements of **COA: Stormwater Requirements (#64 through #68)** would ensure that potential impacts related to additional sources of polluted runoff would be less than significant.

iv) impede or redirect flood flows?

No Impact. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No 06001C0057G,[41] the project site is not located within a 100-year or 500-year flood hazard zone. Therefore, the proposed project would not impede or redirect flood flows.

d) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?

No Impact. As discussed in subsection c, above, the project site is not located within a 100-year or 500-year flood hazard zone. The project site is not located in an area mapped by the California Department of Conservation as being potentially inundated by a tsunami.[42] Based on the distance of the project site from the Bay and Aquatic Park lagoons and its elevation above these water bodies, potential seiches in the Bay and Aquatic Park would not impact the project site. Therefore, no impacts would occur related to the release of pollutants in the event of inundation from flooding.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant. The Basin Plan establishes the water quality objectives and strategies needed to protect designated beneficial water uses in the San Francisco Bay region. The State Water Resources Control Board and the Regional Water Board enforce compliance with the water quality objectives of the Basin Plan through the issuance of NPDES permits. The project's compliance with existing permit requirements and the City's COAs would ensure that the proposed project would not have the potential to conflict with the Basin Plan.

A Groundwater Sustainability Plan (GSP) for the Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin,[43] was recently issued by the EBMUD and City of Hayward groundwater sustainability agencies (GSAs). According to the GSP, the sustainability goal for the East Bay Plain Subbasin is to manage and protect the Subbasin in a manner that avoids the six undesirable

[41] Federal Emergency Management Agency (FEMA), 2009. Flood Insurance Rate Map (FIRM) No. 06001C0057G. August 3. Available at: https://msc.fema.gov/portal/firmette?latitude=37.856398987516 95&longitude=-122.260135040739 63, accessed January 12, 2023.

[42] California Department of Conservation, 2023. Alameda County Tsunami Hazard Areas. Available at: https://www.conservation.ca.gov/cgs/tsunami/maps/alameda, accessed January 12, 2023.

[43] EBMUD GSA and City of Hayward GSA, 2022, op. cit.

results listed below while continuing to collect and analyze data to support science-based decision making to evaluate new opportunities for sustainable groundwater beneficial uses:

- Chronic lowering of groundwater levels, indicating a significant and unreasonable depletion of supply.
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.
- Significant and unreasonable degraded water quality.
- Significant and unreasonable land subsidence.
- Depletions of interconnected surface water and groundwater that have significant and unreasonable reductions in beneficial uses of surface water, including beneficial use by ecosystems that depend on groundwater.

According to the GSP, the East Bay Plain Subbasin is not experiencing a chronic lowering of groundwater levels and is currently in a sustainable and stable condition because estimated groundwater pumping from the 1990s to present is well below the estimated sustainable yield of the Subbasin. Additionally, the Subbasin has not experienced significant seawater intrusion even during historical periods of much greater groundwater pumping than is occurring today, and the Subbasin has no observed inelastic land subsidence even during historical periods of much greater groundwater pumping and much lower confined aquifer groundwater elevations than are occurring today.

As detailed in subsection b, above, any groundwater extracted during construction dewatering would be minimal and the project would not have a substantial effect on groundwater recharge. Additionally, project operation would not include groundwater extraction, because municipal water for the project would not be supplied from the groundwater basin. For these reasons, the proposed project would not conflict with or obstruct the implementation of a sustainable groundwater management plan and this impact would be less than significant.

K. LAND USE AND PLANNING

Environmental Setting

The project site's General Plan land use designation, as described in the 2001 Berkeley General Plan Land Use Element, is Avenue Commercial (AC). These areas of Berkeley are characterized by pedestrian-oriented commercial development and multi-family residential structures. These areas are typically located on wide, multi-lane avenues served by transit or Bay Area Rapid Transit (BART). The project site's zoning designation is Corridor-Commercial (C-C). The C-C district is intended to implement the General Plan's designations for Avenue Commercial areas; provide locations for a wide variety of activities along thoroughfares; encourage development in underutilized neighborhood and community shopping areas; and promote development compatible with adjacent commercial and residential areas.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

a) Physically divide an established community?

No Impact. The proposed project would not result in development that would physically divide a community. Typically, division of an established community could result from the construction of a physical feature, such as a wall, interstate highway, airport, roadway, or railroad tracks, or the removal of a means of access, such as a local road or bridge that could impair mobility or constrain travel within an existing community, or between a community and outlying areas. The project would involve improvements to an existing gas station site, none of which would construct buildings or infrastructure that would restrict movement within the surrounding community. For these reasons, the project would have no impact related to the division of an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed uses would be consistent with the C-C zone's permitted uses, which includes EV charging stations and vehicle wash. Furthermore, the project would be consistent

with all applicable development standards and the project does not require use of any deviations from applicable standards. For these reasons, the project would have no impact related land use plans, policies, and regulations.

L. MINERAL RESOURCES

Environmental Setting

Minerals are naturally occurring chemical elements or compounds, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat, and oil-bearing rock, but excluding geothermal resources, natural gas, and petroleum.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact (a and b). The project is in a highly urbanized area without known mineral resources of value. The project site does not contain unique conditions or features that would result in project-specific impacts. As such, the project would have no impacts related to mineral resources.

M. NOISE

Environmental Setting

Noise is defined as a sound or series of sounds that are intrusive, objectionable, or disruptive to daily life. Noise levels are measured to regulate ambient noise and protect residents of Berkeley from exposure to excessive noise. The acoustic environment on and near the project site is dominated by noises typical of residential and commercial neighborhoods, including vehicular traffic, pedestrian conversations, and doors slamming. The primary noise source in the surrounding area is vehicle traffic.

Impact Analysis

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:					
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 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?	☐	☐	☐	☒

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Noise Generated During Project Construction

Less than Significant. Construction activities would temporarily increase noise levels in the vicinity of the project site. The primary source of noise during construction would be generated by off-road equipment activity on the project site. Construction noise levels would vary from day-to-day, depending on the number and condition of the equipment being used, the types and duration of activity being performed, the distance between the noise source and the receptor, and the presence or absence of barriers, if any, between the noise source and receptor. Pile driving, which can generate extreme levels of noise, is not proposed as part of the proposed project.

Construction would require limited use of heavy-duty equipment for short periods of time (e.g., less than 10 days), because the vehicle wash building will be prefabricated and assembled on-site. Typical heavy-duty equipment that may be used to assemble the prefabricated vehicle wash includes a forklift, small excavator, and crane. Therefore, construction is not expected to generate substantial noise in the project vicinity. Furthermore, implementation of the City's COAs, including **COA: Construction Noise Reduction Program (#17), COA: Construction Noise Management – Public Notice Required (#21), COA: Construction Phases (#22), COA: Construction Hours (#49)**, **COA: Construction Hours – Exceptions (#50)**, and **COA: Project Construction Website *(*#51)**, would reduce construction noise levels at nearby receptors to the maximum extent that is technically and economically feasible. Because noise would be reduced to the maximum extent that is technically and economically feasible, the project construction would be consistent with the regulations outlined in the Berkeley noise ordinance, BMC Section 13.40.070. The proper implementation of these COAs would ensure that the construction of the proposed project would not conflict with the City of Berkeley's construction noise standards and therefore, construction noise impacts would be less than significant.

Standard Conditions of Approval:

COA: Construction Noise Reduction Program (#17). The applicant shall develop a site-specific noise reduction program prepared by a qualified acoustical consultant to reduce construction noise impacts to the maximum extent feasible, subject to review and approval of the Zoning Officer. The noise reduction program shall include the time limits for construction listed above, as measures needed to ensure that construction complies with BMC Section 13.40.070. The noise reduction program should include, but shall not be limited to, the following available controls to reduce construction noise levels as low as practical:

A. Construction equipment should be well maintained and used judiciously to be as quiet as practical.

B. Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.

C. Utilize "quiet" models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.

D. Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible.

E. Prohibit unnecessary idling of internal combustion engines.

F. If impact pile driving is required, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.

G. Construct solid plywood fences around construction sites adjacent to operational business, residences, or other noise-sensitive land uses where the noise control plan analysis determines that a barrier would be effective at reducing noise.

H. Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.

I. Route construction related traffic along major roadways and away from sensitive receptors where feasible.

COA: Construction Noise Management – Public Notice Required (#21). At least two weeks prior to initiating any construction activities at the site, the applicant shall provide notice to businesses and residents within 500 feet of the project site. This notice shall at a minimum provide the following: (1) project description, (2) description of construction activities during extended work hours and reason for extended hours, (3) daily construction schedule (i.e., time of day) and expected duration (number of months), (4) the name and phone number of the Project Liaison for the project that is responsible for responding to any local complaints, and (5) that construction work is about to commence. The liaison would determine the cause of all construction-related complaints (e.g., starting too early, bad muffler, worker parking, etc.) and institute reasonable measures to correct the problem. A copy of such notice and methodology for distributing the notice shall be provided in advance to the City for review and approval.

COA: Construction Phases (#22). The applicant shall provide the Zoning Officer with a schedule of major construction phases with start dates and expected duration, a description of the activities and anticipated noise levels of each phase, and the name(s) and phone number(s) of the individual(s) directly supervising each phase. The Zoning Officer or his/her designee shall have the authority to require an on-site meeting with these individuals as necessary to ensure compliance with these conditions. The applicant shall notify the Zoning Officer of any changes to this schedule as soon as possible.

COA: Construction Hours (#49). Construction activity shall be limited to between the hours of 7:00 AM and 6:00 PM on Monday through Friday, and between 9:00 AM and 4:00 PM on Saturday. No construction-related activity shall occur on Sunday or any Federal Holiday.

COA: Construction Hours – Exceptions (#50). It is recognized that certain construction activities, such as the placement of concrete, must be performed in a continuous manner and may require an extension of these work hours. Prior to initiating any activity that might require a longer period, the developer must notify the Zoning Officer and request an exception for a finite period of time. If the Zoning Officer approves the request, then two weeks prior to the expanded schedule, the developer shall notify businesses and residents

within 500 feet of the project site describing the expanded construction hours. A copy of such notice and methodology for distributing the notice shall be provided in advance to the City for review and approval. The project shall not be allowed more than 15 extended working days.

COA: Project Construction Website *(#51).* The applicant shall establish a project construction website with the following information clearly accessible and updated monthly or more frequently as changes warrant:

- Contact information (i.e., "hotline" phone number, and email address) for the project construction manager.
- Calendar and schedule of daily/weekly/monthly construction activities.
- The final Conditions of Approval, Mitigation Monitoring and Reporting Program, Transportation Construction Plan, Construction Noise Reduction Program, and any other reports or programs related to construction noise, air quality, and traffic.

Noise Generated During Project Operation

In September 2021, an Environmental Noise Assessment was prepared for operation of the proposed project (Appendix A). The existing ambient noise environment in the immediate project vicinity is defined primarily by traffic on Ashby Avenue and Telegraph Avenue, and to a lesser extent by intermittent activities at adjacent commercial uses. Adjacent receptors include single-family residences to the west and north. Based on short-term noise level measurements collected at the southwest corner of the project site, the median and maximum noise levels at the project site are 61 decibels (dB) L_{50} and 74 dB Lmax, respectively.[44,45]

Noise generated by project-related activities were quantified through a combination of manufacturer reference noise level data and application of accepted noise modeling techniques. The most significant noise source associated with the proposed project has been identified as the vehicle wash dryer assembly—used for drying the vehicles at the end of the wash cycle. According to the project sponsor, the project would not have an exterior vacuum system. The project sponsor has indicated that the vehicle wash hours of operation will be limited to the hours of 7:00 a.m. to 10:00 p.m. Based on the measured ambient noise level data, and pursuant to the criteria established in BMC Section 13.40.050(A)(3), the following noise level standards shown in Table 2 have been applied to the project for the adjacent residential land uses to the west and north.

[44] Lx = The noise level exceeded X% of a specified time period. For example, L50 indicates a noise level exceeded 50 percent of the time.

[45] Lmax = The maximum sound level during a single noise event.

TABLE 2 CITY OF BERKELEY DAYTIME NOISE LEVEL LIMITS APPLIED TO THE PROJECT

	Noise Standards Applied to the Project (dB)	
Receptor	**Exterior, L_{50}**	**Interior, L_8**
Residence (adjacent to west)	61[a]	45[b]
Residence (adjacent to north)	55[b]	45[b]

[a] Pursuant to BMC Section 13.40.050 (A)(3), if the measured ambient noise level is greater than the level permissible, the sound level shall not exceed the ambient noise level.
[b] In lieu of ambient noise level measurements, the City's unadjusted noise level standard was applied.
Source: Appendix A.

Vehicle wash drying assembly noise exposure was calculated at the nearest residential property lines and the results of those calculations are presented in Table 3. Table 3 results include consideration of the noise attenuation that would be provided by the following project design measures:

- A 5 dB noise level reduction at the adjacent residences to the west and north provided by the proposed 6-foot-tall concrete-masonry unit (CMU) wall constructed along the project property boundaries to the north and west of the proposed vehicle wash building.
- A 15 dB noise level reduction at the adjacent residence to the west provided by the western wall of the vehicle wash building.
- A 12 dB noise level reduction at the adjacent residences to the west and north provided by an automated closure of the tunnel entrance door. This system will always keep the tunnel entrance door in the closed position during operation of the vehicle wash drying system. Tunnel doors are automatic and coordinated with the dryer switch. The dryer will not operate until the door is shut.

As indicated in Table 3, operation of the proposed vehicle wash would comply with the applicable City of Berkeley exterior noise level limits at those property lines.

TABLE 3 ESTIMATED VEHICLE WASH DRYING ASSEMBLY NOISE LEVELS AT NEAREST RESIDENTIAL PROPERTY LINES

Receptor	**Predicted Noise Levels, L50 (dB)**	**Applicable Exterior Noise Limit, L50 (dB)**
Residence (adjacent to west)	50	61
Residence (adjacent to north)	37	55

Source: Appendix A.

Assuming standard spherical spreading loss (-6 dB per doubling of distance), the vehicle wash drying assembly noise level exposure is predicted to be 45 dB at the building facade of the

residence located adjacent to the west of the project. As shown in Table 2, vehicle wash drying equipment would be subject to the City of Berkeley interior daytime noise level standard of 45 dB L_8. With windows in the open configuration, the exterior to interior residential building facade noise level reduction is estimated to be 15 dB. The resulting vehicle wash drying equipment interior noise level of 30 dB L_8 would satisfy the applicable City of City of Berkeley 45 dB L_8 interior daytime noise level standard by 15 dB. As a result, operation of the proposed vehicle wash would comply with the applicable City of Berkeley interior noise level limits at the adjacent residences to the west and north, and operation noise impacts would be less than significant.

b) Generation of excessive ground borne vibration or ground borne noise levels?

Less than Significant.

Vibration Generated during Project Construction

Construction activities can result in varying degrees of ground vibration, depending on the equipment, activity, and relative proximity to sensitive receptors. As discussed above, construction would require limited use of heavy-duty equipment for short periods of time (e.g., less than 10 days) because the vehicle wash building will be prefabricated and assembled on-site. Because the site has already been developed for a parking lot, soil compaction activities that require the use of a vibratory roller, plate compactor, or similar equipment would be limited to the relatively small areas of excavation (e.g., trenches and vehicle wash building footprint). Therefore, construction is not expected to generate substantial vibration in the project vicinity. With implementation of **COA: Damage Due to Construction Vibration (#18)** for construction vibration, construction of the project would have a less-than-significant impact related to groundborne vibration or groundborne noise.

Standard Conditions of Approval:

> **COA: Damage Due to Construction Vibration (#18)**. The project applicant shall submit screening level analysis prior to, or concurrent with demolition building permit. If a screening level analysis shows that the project has the potential to result in damage to structures, a structural engineer or other appropriate professional shall be retained to prepare a vibration impact assessment (assessment). The assessment shall take into account project specific information such as the composition of the structures, location of the various types of equipment used during each phase of the project, as well as the soil characteristics in the project area, in order to determine whether project construction may cause damage to any of the structures identified as potentially impacted in the screening level analysis. If the assessment finds that the project may cause damage to nearby structures, the structural engineer or other appropriate professional shall recommend design means and methods of construction that to avoid the potential damage, if feasible. The assessment and its recommendations shall be reviewed and approved by the Building and Safety Division and

the Zoning Officer. If there are no feasible design means or methods to eliminate the potential for damage, the structural engineer or other appropriate professional shall undertake an existing conditions study (study) of any structures (or, in case of large buildings, of the portions of the structures) that may experience damage. This study shall

- Establish the baseline condition of these structures, including, but not limited to, the location and extent of any visible cracks or spalls; and
- Include written descriptions and photographs.

The study shall be reviewed and approved by the Building and Safety Division and the Zoning Officer prior to issuance of a grading permit. Upon completion of the project, the structures (or, in case of large buildings, of the portions of the structures) previously inspected will be resurveyed, and any new cracks or other changes shall be compared to pre-construction conditions and a determination shall be made as to whether the proposed project caused the damage. The findings shall be submitted to the Building and Safety Division and the Zoning Officer for review. If it is determined that project construction has resulted in damage to the structure, the damage shall be repaired to the pre-existing condition by the project sponsor, provided that the property owner approves of the repair.

Vibration Generated During Project Operation

The proposed project would not involve equipment or activities that generate excessive groundborne vibration or groundborne noise levels. Therefore, operation of the project would have a less-than-significant impact related to groundborne vibration or groundborne noise.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 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?

No Impact. The project site is not located within the vicinity of a private airstrip. Therefore, the project would have no impact related to the exposure of people to excess noise levels from private airstrips. Oakland International Airport, located approximately 10 miles to the southeast, is the closest airport to the project site. The project site is not located within a public airport land use plan or within 2 miles of any other public use airport.[46] Therefore, the proposed project would have no impact related to the exposure of people to excess noise levels from public use airports.

[46] Alameda County Community Development Agency, 2010, op. cit.

N. PARKS AND RECREATION

Environmental Setting

Parks and other recreation facilities in Berkeley are under the jurisdiction of the Berkeley Parks, Recreation and Waterfront Department. The department manages the City's parks, playgrounds, pools, camps, community centers, and waterfront facilities. The nearest public parks are Bateman Mall Park (0.3 miles) and Willard Park (0.5 miles).

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact (a and b). The proposed project, which consists of a new vehicle wash and EV charging stations, would not result in direct or indirect new residents to Berkeley. For this reason, use of existing neighborhood, regional parks, and other recreational facilities is not anticipated to increase due to the project. Therefore, the project would not increase the use of or have an impact on existing recreational facilities and would not increase demand for new or expanded recreational facilities.

O. POPULATION AND HOUSING

Environmental Setting

As of 2020, Berkeley had an estimated population of 117,147 residents and an estimated housing stock of 50,228 dwelling units.[47,48] Projections suggest that this population growth will continue. The population is expected to increase from 123,065 to 140,100 by the year 2040.[49]

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact (a and b). The proposed project, which consists of a new vehicle wash and EV charging stations, would not result in new residents in Berkeley either directly or indirectly. The project also would be located on the site of an existing gas station, convenience store, and fast-food restaurant and would not cause the direct or indirect displacement of housing. Therefore, the project would have no impacts related to population growth or displacement of housing.

[47] American Community Survey, 2021. 1-year estimates (Population and Race). Available at: https://dof.ca.gov/wp-content/uploads/Reports/Demographic_Reports/American_Community_Survey/Web_ACS2021_Pop-Race.xlsx, accessed January 19, 2023.

[48] American Community Survey, 2021. 1-year estimates (Housing). Available at: https://dof.ca.gov/wp-content/uploads/Reports/Demographic_Reports/American_Community_Survey/Web_ACS2021_Housing.xlsx, accessed January 19, 2023.

[49] City of Berkeley, 2015. City of Berkeley 2015-2023 Housing Element. Available at: https://cityofberkeley.app.box.com/s/x7cfk49v009hr56iw3exsq0gx0w7e6y3, accessed January 19, 2023.

P. PUBLIC SERVICES

Environmental Setting

The Berkeley Fire Department (BFD) provides fire protection and emergency medical services to the project site and the nearest fire station is Fire Station No. 3 (0.5 miles). The Berkeley Police Department serves the project site, which is within Northern Beat District 8. The proposed project is within the Berkeley Union School District and the nearest schools include Sylvia Mendez Elementary School (0.2 miles), Willard Middle School (0.2 miles), and Berkeley High School (1.4 miles). The Berkeley Parks and Recreation Department provides services to City residents and the nearest park is Bateman Mall Park approximately 0.3-miles to the southwest.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities?

No Impact. No new residents in Berkeley are expected to be generated, either directly or indirectly, due to the nature of the project, which would add an automated vehicle wash system to an existing gas station. Thus, the project would not result in substantial adverse impacts due to the need for new or physically altered public facilities for services such as fire and police

protection, schools, and libraries. See *Section N, Recreation*, above regarding impacts on parks and recreation facilities. For these reasons, the project would have no impact on public services.

Q. TRANSPORTATION

Environmental Setting

The project site is at the intersection of Telegraph Avenue and Ashby Avenue, both of which are identified as major streets in the City of Berkeley General Plan.

The Ashby BART station is located on Adeline Street and Ashby Avenue, approximately 0.7 miles west from the project site. This station is located on the Richmond-Fremont Line, which connects to other destinations in the Bay Area at the MacArthur Station. Alameda-Contra Costa County Transit and the University of California shuttle services provide extensive bus transit service at the BART Station. There is also a bus stop adjacent to the site along Telegraph Avenue for the transit line 6.

A Class II bike lane is adjacent to the site along Telegraph Avenue and Ashby Avenue contains a Class III bike lane.

Impact Analysis

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b)	Conflict or be inconsistent with CEQA Guidelines Section 15-64.3, Subdivision (b)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d)	Result in inadequate emergency access?	☐	☐	☒	☐

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

Less Than Significant (a and b). The City of Berkeley's VMT Criteria and Thresholds[50] provides that vehicle miles traveled (VMT) analysis of smaller, less complex projects can be simplified by

[50] City of Berkeley, 2020. City of Berkeley VMT Criteria and Thresholds. June 29. Available at: https://berkeleyca.gov/sites/default/files/2022-02/VMT-Criteria-and-Thresholds.pdf, accessed January 12, 2023.

using a screening process. Specifically, non-residential projects which total less than 10,000 square feet are expected to result in less-than-significant impacts. Because the project only proposes to construct a self-service vehicle wash and other various site improvements, it is expected that the project would result in a less-than-significant impact and is screened out from a detailed VMT analysis. Furthermore, the project would introduce an auxiliary use to an existing use (i.e., adding a vehicle wash and EV charging stations to a site with an existing gas station, convenience store, and fast-food restaurant). For these reasons, it's reasonable to expect that the amount of VMT generated by the project would be minimal, as dedicated trips to utilize the vehicle wash is expected to be very low. The project may potentially even reduce trips, as users of the gas station would not be required to make a separate trip to another vehicle wash located elsewhere.

The proposed project would have a significant impact related to transit facilities if it would conflict with the goals and policies related to transit use in the Berkeley Strategic Transportation Plan or Berkeley Strategic Transportation Plan. In particular, the project would result in a conflict if it would discourage people from using transit or decrease transit efficiency or result in a conflict if it would impair the implementation of any planned bicycle boulevards, result in street design that would be unsafe for bicyclists or discourage bicycle use in the vicinity of the project site. The project proposes no modifications to any transit stops or bicycle infrastructure, nor would it impact transit use or affect any plans for such facilities.

For the reasons described above, the project would result in less-than-significant impacts related transportation plans and policies and VMT.

c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

d) *Result in inadequate emergency access?*

Less Than Significant (c and d). The project would add a drive through vehicle wash to an existing gas station site and would not introduce any geometric design features or incompatible uses, nor would it modify circulation patterns in a manner that would affect emergency access. For this reason, the project would have a less than significant impact.

R. TRIBAL CULTURAL RESOURCES

Environmental Setting

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted, expanding CEQA by defining a new resource category, "tribal cultural resources." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency. The project site is currently developed with a gas station and other commercial uses. The project site is paved and covered with existing buildings. No historic resources have been identified at the project site.

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☒	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☒	☐

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant. As described above in *Section III.E, Cultural Resources*, the project site is currently developed with a gas station and other commercial uses, the site is not on the City's List of Designated Landmarks or Landmarks Map, and the project would result in less-than-significant impacts related to Cultural Resources.

Upon receipt of application for this project, the City of Berkeley sent a notice of a received application to the Ohlone Tribe. As of date of issuance of this document, no correspondence or request for consultation has been received. Also, as described above in *Section III.E, Cultural Resources*, the potential to uncover Native American human remains exists in locations throughout California; however, the site has been previously developed, other development has occurred around the project area, and discoveries are not expected. Although not anticipated, human remains could be identified during site-preparation and grading activities, resulting in a potentially significant impact to Native American cultural resources, but with implementation of **COA: Archaeological Resources (#59)** and **COA: Human Remains (#60)** described above, impacts would remain less than significant.

S. UTILITIES AND SERVICE SYSTEMS

Environmental Setting

The project site is located in an urban area and is served by existing utility systems. Water supply to the project would be provided by the EBMUD water system, which is supplied from the Mokelumne River.[51] The City's owns and operates the wastewater collection system and is responsible for conveying wastewater to EMBUD's Wastewater Treatment Plan (WWTP). Solid waste, construction recyclable materials, and compostable materials collected by the City and its contracted companies are transported from the Berkeley Transfer Station, located at 1201 Second Street, for disposal, sorting, or composting.

Impact Analysis

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d)	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

[51] East Bay Municipal Utility District (EBMUD), 2023, op. cit.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant (a, b, and c). Implementation of the project would not influence wastewater treatment requirements. The project would not install habitable structures or substantially increase activity at the site. Landscaped areas will be watered in minimal amounts. Operation of the vehicle wash would involve the use of approximately 28 gallons of water per car. For each car, about 15 gallons of rinse water will be utilized from the on-site reclaim system and 13 gallons of potable water will be used. Overall, 6 gallons of rinse water will be lost to evaporation and carry out, and about 7 gallons of the rinse water will be discharged to the sewer system. The vehicle wash is expected to have approximately 14,000 washes per year using approximately with an estimated 5,900 gallons of water used per day during the busier periods of the year. Daily water usage is expected to be less during winter and wet months. Assuming 14,000 washes per year (or approximately 38.3 washes per day) at a rate of 28 gallons per wash equates to a yearly amortized rate of approximately 1,074 gallons per day.

EBMUD's 2020 UWMP estimated the average daily water demand in its service area to be 180 million gallons per day (mgd).[52] Conservatively assuming the project would use approximately 5,900 gallons per day, the additional water demand created by the project represents about a 0.003 percent of EBMUD's current water demand. This does not represent a significant increase in water usage that would otherwise necessitate the need to expand water facilities.

As described above, the City's owns and operates the wastewater collection system and is responsible for conveying wastewater to EMBUD's WWTP. EBMUD's WWTP receives and treats an average of 63 mgd with a maximum primary treatment capacity of 320 mgd and secondary treatment for up to 168 mgd. Conservatively assuming that the project would dispose of 5,900 gallons per day to the wastewater system, this would represent a 0.0018 percent increase over existing average treatment. This does not represent a significant increase in wastewater generate that would otherwise necessitate the need to expand wastewater facilities.

As part of the project design and approval process, the project will be required to prepare an analysis of the wastewater flows generated by the project, show how the sewer lateral design will have capacity to handle such flows, and assess whether the sewer main has sufficient capacity to serve the project. The City will review this information and determine if the project needs to increase the sewer main capacity and/or protect the existing sewer line from additional load.

While the site would require use of water and wastewater systems for the vehicle wash, it would not result in a significant increase in demand for water or wastewater services above what is

[52] East Bay Municipal Utility District (EBMUD), 2021. Urban Water Management Plan 2020. June. Available at: https://www.ebmud.com/download_file/force/9151/735?UWMP-2020-FINAL-bookmarks.pdf, accessed on: January 19, 2023.

currently being used. Therefore, there would be less-than-significant impacts regarding water or wastewater.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant (d and e). Implementation of the project would not significantly affect generation of solid waste. Although construction activities may require the disposal of construction debris, solid waste generation would be temporary. Little to no increase in solid waste generation, which would consist only of possible disposable drying materials or waste from customer vehicles, would occur during operation of the proposed vehicle wash. No solid waste would be generated by the EV charging stations. Therefore, there would have less-than-significant impacts on the City's solid waste capacity and the project would comply with solid waste statutes and regulations related to solid waste.

T. WILDFIRE

Environmental Setting

The California Department of Forestry and Fire Protection (CAL FIRE) designates fire hazard severity zones for areas under state jurisdiction. For areas under local jurisdiction, CAL FIRE identifies areas that they consider to be Very High Fire Hazard Severity Zones (VHFHSZs). The project site is in an urban area and is not within a VHFHSZ.[53]

Impact Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evaluation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

a) Substantially impair an adopted emergency response plan or emergency evaluation plan?

No Impact. The project site would not impair the implementation of, or interfere with, an adopted emergency response plan and is not within a VHFHSZ.[54] In addition, the project site is not located within a State Responsibility Area for fire service.[55] Therefore, the project would have no impacts related to wildfire emergency response and evacuation plans.

[53] CAL FIRE, 2008, op. cit.

[54] Ibid.

[55] CAL FIRE, 2007. CAL FIRE Fire Hazard Severity Zones in SRA – Alameda County. November 7. Available at: https://osfm.fire.ca.gov/media/7271/fhszs_map1.pdf, accessed January 12, 2023.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The project site is in a relatively flat area and is not subject to any other external factors which could exacerbate wildfire risks. Furthermore, the project site is not located in an area formally identified as subject to wildland fire hazards.[56] Therefore, the project would have no impacts related to wildfire risks.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The project as proposed does not include any additional infrastructure that could exacerbate fire risks.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant. The project site is in an urban area and is not within a VHFHSZ. The nearest designated fire zone is approximately 1 mile to the east.[57] Therefore, the project would not expose people or structures to significant risks due to post-fire instability or drainage changes.

[56] CAL FIRE, 2008, op. cit.
[57] Ibid.

U. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

No Impact. The project site is fully developed as an existing gasoline station in an urban area. The site is not expected to support any candidate or special-status species or species identified for protection in local, regional, or national wildlife plans or policies or associated habitat for such species; thus, the project does not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, no impact would occur.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant. No significant effects specific to the project or its site were identified that could not be reduced to a less-than-significant level. The COAs proposed in this document would mitigate any potential contribution to cumulative impacts. All other impacts would be less than significant. Therefore, the proposed project does not have impacts that are individually limited, but cumulatively considerable.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant. As described throughout this document, there is nothing in the nature of the proposed development and property improvements that would have a substantial adverse effect on human beings, either directly or indirectly, with the implementation of COAs . Therefore, impacts would be less than significant.

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Environmental Noise Assessment

Automatic Car Wash at 2996 Telegraph Avenue

Berkeley, California

BAC Job # 2020-050

Prepared For:

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Prepared By:

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Dario Gotchet, Senior Consultant

September 2, 2021

BOLLARD
Acoustical Consultants

Introduction

The proposed project consists of the construction of an Automatic Car Wash at 2996 Telegraph Avenue in Berkeley, California (APN: 052-1578-021-1). Existing land uses in the project vicinity include commercial uses to the south and east, and residential to the north and west. The project area and proposed site plan are shown on Figures 1 and 2, respectively.

Due to the proposed operations of the project and the proximity of existing residences, Bollard Acoustical Consultants, Inc. (BAC) was retained to prepare an assessment of potential noise impacts associated with the project. This report contains the analysis methodology and results.

Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second or Hertz (Hz). Definitions of acoustical terminology used in this report are presented in Appendix A.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference defined as 0 dB. Other sound pressures are then compared to the reference pressure and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness. Figure 3 illustrates common noise levels associated with various sources.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by weighting the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually one hour). The L_{eq} is the foundation of the Day-Night Average Level noise descriptor, L_{dn} (or DNL), and shows very good correlation with community response to noise.

Legend

- Project Area (Approximate)
- Parcel Boundaries
- Short-Term Noise Measurement Location

N

Scale (feet)

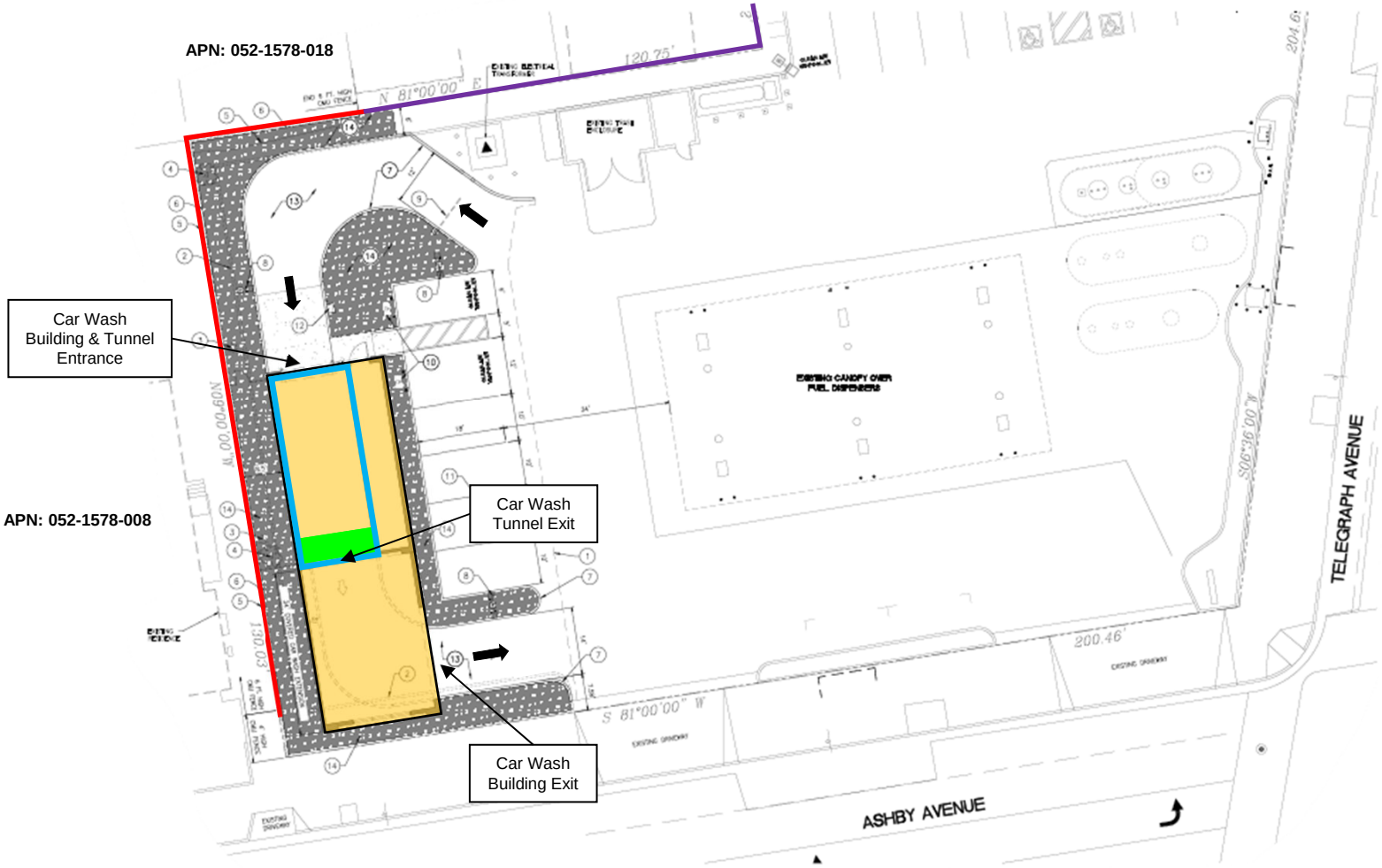
0 40 80

Automatic Car Wash
2996 Telegraph Avenue
Berkeley, California

Project Area

Figure 1

BOLLARD Acoustical



Drawings dated July 13, 2021

Legend

- Car Wash Building
- Car Wash Tunnel
- Drying Assembly Equipment
- Proposed 6' CMU Wall
- Existing 6' Solid Wood Fence

N

Scale (Feet)

0 20 40

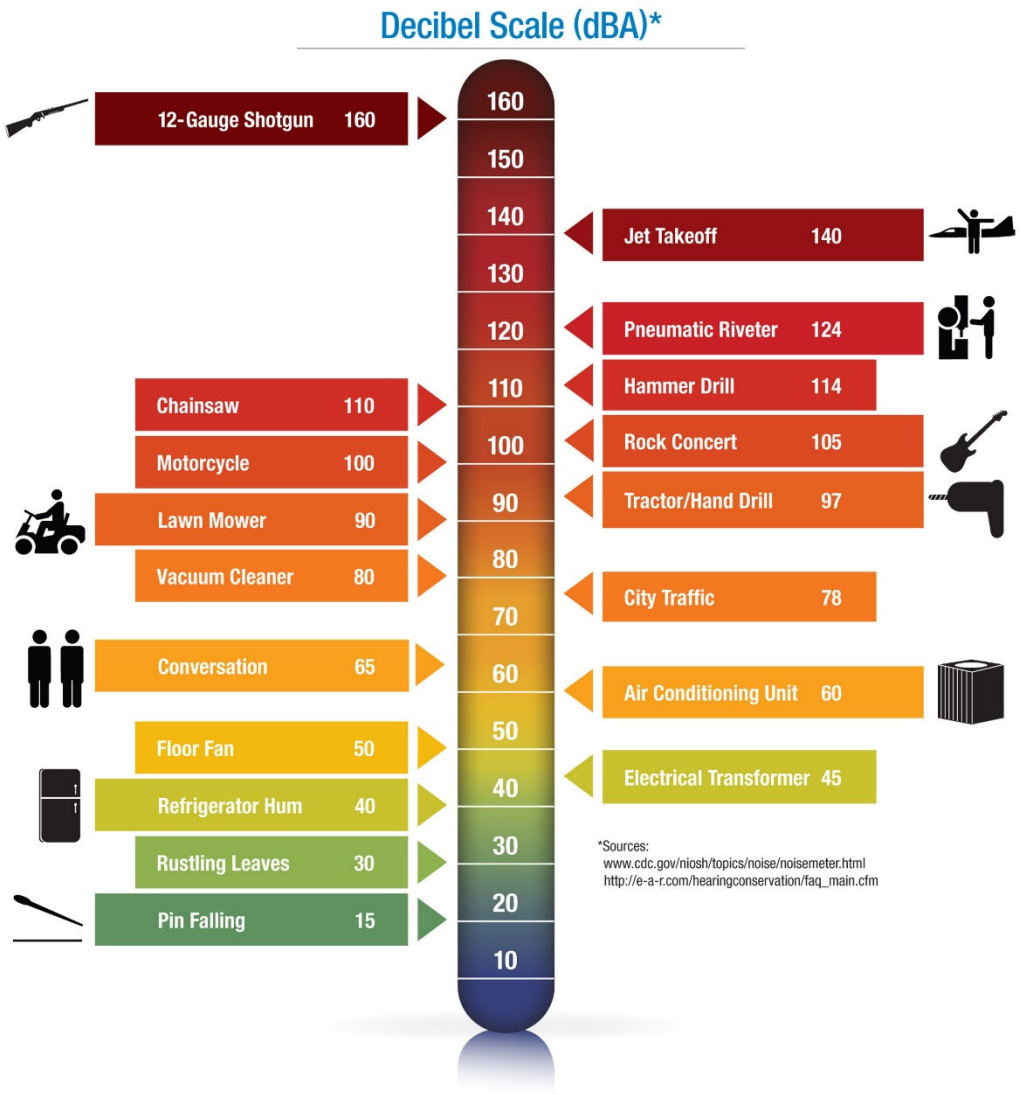
Automatic Car Wash
2996 Telegraph Avenue
Berkeley, California

Development Site Plan

Figure 2

BOLLARD Acoustical Consultants

Figure 3
Typical A-Weighted Sound Levels of Common Noise Sources



DNL is based upon the average noise level over a 24-hour day, with a +10-decibel weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because DNL represents a 24-hour average, it tends to disguise short-term variations in the noise environment. DNL-based noise standards are commonly used to assess noise impacts associated with traffic, railroad, and aircraft noise sources.

Existing Ambient Noise Environment

The existing ambient noise environment in the immediate project vicinity is defined primarily by traffic on Ashby Avenue and Telegraph Avenue, and to a lesser extent by intermittent activities at adjacent commercial uses. To generally quantify the existing ambient noise environment in the immediate project vicinity, BAC conducted short-term (15-minute) noise level measurements on Wednesday, June 3, 2020. The noise survey location is identified on Figure 1. Photographs of the noise level survey location are provided in Appendix B.

A Larson-Davis Laboratories (LDL) Model LxT precision integrating sound level meter was used to complete the noise level survey. The meter was calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy off the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4). The noise level measurement survey results are summarized below in Table 1.

Table 1
Summary of Short-Term Ambient Noise Survey Results – June 3, 2020

		Measured Noise Levels, dB	
Site Description	**Time**	**L_{50}**	**L_{max}**
Site 1: Approximately 60' from centerline of Ashby Avenue	10:34 a.m.	61	74
Source: Bollard Acoustical Consultants, Inc. (2020)			

The Table 1 data indicate that measured median and maximum noise levels during the survey were 61 dB L_{50} and 74 dB L_{max}, respectively. The significance of the measured ambient noise levels is discussed in the following section.

Criteria for Acceptable Noise Exposure

City of Berkeley Community Noise Ordinance

The City of Berkeley Community Noise Ordinance provides exterior and interior noise limits for stationary noise sources, such as those proposed by the project. The exterior noise limits are determined by the zoning district of the property subject to the noise. The City's interior noise limits are applicable to residential dwellings. The adjacent parcels to the north and west of the project are residentially zoned R-2 (two-family) and R-2A (multiple-family), respectively. The City code sections applicable to the project are provided below.

Section 13.40.050 Exterior noise standards.

A. Maximum permissible sound levels shall be determined by the zoning district of the property subject to the noise, not the property from which the noise originates.

1. The noise standards for various categories of land use in Table 2 or 3 shall, unless otherwise specifically indicated in other codes, apply to all such property within a designated zone.
2. No person shall operate or cause to operate any source of sound at any location within the incorporated City or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the sound level when measured on any other property to exceed:
   a. The noise standard for a cumulative period of more than 30 minutes in any hour, or
   b. The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
   c. The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour; or
   d. The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour; or
   e. The noise standard plus 20 dBA for any period of time.

Table 2
Exterior Noise Limits – Zoning Districts R-1, R-2, R-1A, R-2A and ESR (Summarized)

Duration Exceeded (Min.)	Statistical Descriptor	Noise Level (dB)	
		Daytime (7 AM-10 PM)	Nighttime (10 PM-7 AM)
30	L_{50}	55	45
15	L_{25}	60	50
5	L_{8}	65	55
1	L_{2}	70	60
Any	L_{max}	75	65

Source: City of Berkeley Community Noise Ordinance, Section 13.40.050, Table 13.40-1

3. If the measured ambient noise level is greater than the level permissible within any of the noise limit categories, the sound level when measured on any other property shall not exceed:
   a. The ambient noise level for a cumulative period of more than 30 minutes in any hour, or
   b. The ambient noise level plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
   c. The ambient noise level plus 10 dBA for a cumulative period of more than 5 minutes in any hour; or

d. The ambient noise level plus 15 dBA for a cumulative period of more than 1 minute in any hour; or

e. The ambient noise level plus 20 dBA for any period of time.

Section 13.40.060 Exterior noise standards.

A. Maximum permissible dwelling interior sound levels.

1. The interior noise standards for multi-family residential dwellings as presented in Table 3 shall apply, unless otherwise specifically indicated in other codes, within such dwellings with windows in their normal seasonal configuration.

Table 3
Interior Noise Limits

Duration Exceeded (Min.)	Statistical Descriptor	Noise Level (dB)	
		Daytime (7 AM-10 PM)	Nighttime (10 PM-7 AM)
5	L_8	45	40
1	L_2	50	45
Any	L_{max}	55	50

Source: City of Berkeley Community Noise Ordinance, Section 13.40.060, Table 13.40-2

Noise Standards Applied to the Project

The project applicant has indicated that the car wash hours of operation will be limited to the hours of 8:00 a.m. to 8:00 p.m. Based on this information, the City's *daytime* exterior and interior noise level standards would be applicable to the project. Because the car wash drying system is anticipated to operate throughout the duration of an hour during a worst-case busy hour (i.e., in excess of 30 minutes), the equipment would be subject to the exterior daytime median average noise level standard of 55 dB L_{50} and interior daytime noise level standard of 45 dB L_8.

Comparison of ambient noise level data contained in Table 1 and the City's exterior noise standard shown in Table 2 reveals that the City's daytime median noise level standard of 55 dB L_{50} is being exceeded at site 1, which was located near the property line of the adjacent residential use to the west (APN: 052-1578-008). Based on the measured ambient noise level data, and pursuant to the criteria established in Section 13.40.050(A)(3) of the City of Berkeley Municipal Code, the following exterior noise level standards shown in Table 4 have been applied to the project and assessed at the property line of the nearest (adjacent) residential uses to the north and west.

Table 4
City of Berkeley Daytime Noise Level Limits Applied to the Project

		Noise Standards Applied to the Project (dB)	
APN	**Direction**	**Exterior, L_{50}**	**Interior, L_8**
052-1578-008	West	61[a]	45[b]
052-1578-018	North	55[b]	45[b]

[a] Pursuant to Section 13.40.050 (A)(3), if the measured ambient noise level is greater than the level permissible, the sound level shall not exceed the ambient noise level.
[b] In lieu of ambient noise level measurements, the City's unadjusted noise level standard was applied.
Source: City of Berkeley Community Noise Ordinance and BAC noise measurement data.

Satisfaction of the City's noise level standards at the nearest residential properties to the north and west would ensure satisfaction of the City's noise level limits at residential uses located farther away.

Evaluation of Project-Related Noise Levels

Noise generated by project-related activities were quantified through a combination of manufacturer reference noise level data and application of accepted noise modeling techniques. The most significant noise source associated with the proposed project has been identified as the car wash dryer assembly – used for drying the vehicles at the end of the wash cycle. According to the project applicant, the project does not propose to have an exterior vacuum system. As a result, the following analysis of project-related noise levels focuses on noise associated with the proposed car wash drying assembly equipment.

Predicted Exterior Car Wash Dryer Noise at Nearest Residential Property Lines

According to the project applicant, the project proposes the installation of four (4) PDQ LaserWash 360 On-Board dryers. The manufacturer's specifications for the PDQ LaserWash 360 system is provided as Appendix C. The reference noise levels indicated in the specification sheet are summarized in Table 5.

Table 5
PDQ LaserWash 360 Integrated Dryer System Reference Noise Levels

Door Orientation	Tunnel Entrance/Exit	Reference Noise Level at 10 Feet (dB)
Open	Entrance	82
	Exit	84
Closed	Entrance	70
	Exit	72

Source: PDQ Vehicle Wash Systems

According to BAC noise level measurements conducted at various car wash facilities in recent years, the noise level generation of car wash drying assemblies vary depending on the orientation of the measurement position relative to the tunnel opening. Worst-case drying assembly noise

levels occur at a position directly facing the car wash exit, considered to be 0 degrees off-axis. At off-axis positions, the building facade provides varying degrees of noise level reduction. At positions 45 degrees off-axis relative to the facade of the car wash exit and entrance, drying assembly noise levels are approximately 5 dB lower. At 90 degrees off-axis, drying assembly noise levels are approximately 10 dB lower.

The following car wash drying assembly noise levels presented below include offsets associated with the orientation to tunnel entrance/exit, as discussed above. Noise attenuation due to distance was calculated based on standard spherical spreading loss from a point source (-6 dB per doubling of distance). Distances from equipment relative to car wash entrance/exit used in the predictions were scaled using the provided site plan dated July 13, 2021. Car wash drying assembly noise exposure was calculated at the nearest residential property lines and the results of those calculations are presented in Table 6.

The predicted car wash drying assembly noise levels shown in Table 6 include consideration of the shielding that would be provided by a proposed 6-foot tall CMU wall constructed along the project property boundaries to the north and west. The location of the proposed 6-foot tall solid wall is illustrated on Figure 1. The proposed 6-foot tall CMU wall is estimated to provide approximately 5 dB of noise level reduction at the nearest residential uses to the north and west. The Table 6 results also include consideration of the noise attenuation that would be provided by car wash building construction at the nearest residential property to the west of the tunnel exit (APN: 052-1578-008), which is conservatively estimated to provide approximately 15 dB of noise level reduction.

Table 6
Predicted Car Wash Drying Assembly Noise Levels at Nearest Residential Property Lines

APN[1]	Direction	Nearest Tunnel Opening	Predicted Noise Levels, L_{50} (dB)[2]		Applicable Exterior Noise Limit, L_{50} (dB)[3]
			Doors Open	Doors Closed	
052-1578-008	West	Entrance	62	50	**61**
		Exit	49	37	
052-1578-018	North	Entrance	63	51	**55**

[1] Parcel boundaries are illustrated on Figure 1.
[2] Predicted noise levels at both properties include an adjustment of -5 dB to account for shielding that would be provided by the proposed 6-foot tall CMU wall along the adjacent residential property lines indicated on Figure 1. Predicted noise levels from tunnel exit at APN: 052-1578-008 (west) includes a conservative -15 dB offset to account for the noise attenuation that would be provided by the car wash building construction.
[3] Pursuant to Section 13.40.050(A)(3) of the City of Berkeley Municipal Code.
Source: Bollard Acoustical Consultants, Inc. (2021)

As indicated in Table 6, car wash drying assembly noise levels in the open-door configuration are predicted to exceed the applicable City of Berkeley exterior noise level standards at residential property lines nearest to the tunnel entrance. However, with the tunnel entrance door in the closed position, drying system noise levels are predicted to comply with the applicable City of Berkeley exterior noise level limits at those property lines.

To satisfy the applicable City of Berkeley exterior noise level standards at the nearest residential uses, the car wash tunnel entrance door should be in the closed position during all car drying assembly operations. Provided that the car wash tunnel entrance door is closed during all car wash drying system operations, and the project includes the construction of the 6-foot tall CMU wall at the location illustrated on Figure 2, no further consideration of drying equipment mitigation measures would be warranted for the project relative to the applicable City of Berkeley exterior noise level criteria.

Predicted Interior Car Wash Dryer Noise at Nearest Residences

The nearest residential building to the project is located to the west of the project on APN: 052-1578-008. As discussed in the previous section, the project drying system would be required to operate with the tunnel entrance door in the closed position to comply with the applicable City of Berkeley exterior noise level standards at the nearest residential property lines. Assuming standard spherical spreading loss (-6 dB per doubling of distance), car wash drying assembly noise level exposure with the tunnel entrance door in the closed position is predicted to be 45 dB at the building facade of the residence located on APN: 052-1578-008, including consideration of the shielding provided by the proposed 6-foot tall CMU wall.

As discussed previously, car wash drying equipment would be subject to the City of Berkeley interior daytime noise level standard of 45 dB L_8. With windows in the open configuration, the exterior to interior residential building facade noise level reduction is estimated to be 15 dB. The resulting car wash drying equipment interior noise level of 30 dB L_8 would satisfy the applicable City of Berkeley 45 dB L_8 interior daytime noise level standard by a wide margin. As a result, no exceedances of the City's interior noise level standard are identified.

Conclusions & Recommendations

Noise levels generated by car wash drying assembly operations at the proposed Automatic Car Wash at 2996 Telegraph Avenue are predicted to be satisfactory relative to the applicable City of Berkeley exterior and interior daytime noise level criteria provided that the following measures are implemented by the project:

1. The project includes the construction of a 6-foot tall CMU wall at the location illustrated on Figure 2, as proposed.

2. Operation of the car wash drying system should occur with the tunnel entrance door in the closed position at all times.

3. Car wash operations should be restricted to daytime hours only (8:00 a.m. to 10:00 p.m.).

These conclusions are based on the project site plan shown on Figure 2 (dated July 13, 2021), BAC ambient noise measurement results, equipment information and associated manufacturer's reference noise level data provided by the project applicant, and on the BAC reference noise level measurements conducted at various car wash facilities in recent years. Deviations from the above-mentioned resources could cause actual noise levels to differ from those predicted in this assessment.

This concludes BAC's environmental noise assessment for the proposed Automatic Car Wash at 2996 Telegraph Avenue in Berkeley, California. Please contact BAC at (916) 663-0500 or dariog@bacnoise.com with any questions regarding this assessment.

Appendix A
Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of an acoustic signal.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.

IIC Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.

L_{dn} Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

L_{eq} Equivalent or energy-averaged sound level.

L_{max} The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Masking The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.

Noise Unwanted sound.

Peak Noise The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.

RT_{60} The time it takes reverberant sound to decay by 60 dB once the source has been removed.

STC Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.

Legend

- A Facing south towards Ashby Avenue
- B Facing south towards loading dock (across Ashby Avenue)
- C Facing west towards residence
- D Facing north towards project site

Automatic Car Wash
2996 Telegraph Avenue
Berkeley, California

Photographs of Survey Location

Appendix B

BOLLARD Acoustical

Appendix C

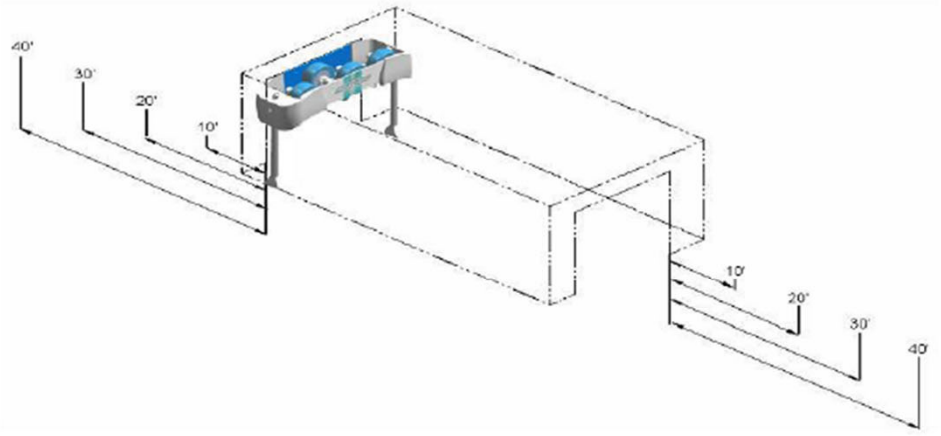
PDQ LaserWash 360 Integrated Dryer Decibel Reading

Below is the test data and associated decibel readings of the PDQ LaserWash 360 with 4 On-Board dryers, with and without doors, on the carwash bay.

DOOR OPEN/CLOSED	ENTRANCE/EXIT	dBA AT DISTANCE FROM DOOR OPENING			
		0' (3.04M)	05' (6.09M)	10' (9.14M)	20' (12.19M)
DOOR OPEN	ENTRANCE	90	87	82	76
	EXIT	92	88	84	78
DOOR CLOSED	ENTRANCE	77	73	70	67
	EXIT	79	75	72	69

Bay Dimensions: 12' (3.65M) H x 15' (4.57M) W x 50' (15.24M) L

Building Materials: Modular steel building with fiberglass lined inner walls; Glass windows on right side



Note: The actual sound level will vary depending on factors including but not limited to the location of the carwash site, type of building, materials used for the site, and size of the building.