338-410 South Alhambra Avenue 64-Unit Condominium Project

Initial Study and Mitigated Negative Declaration

Lead Agency:

City of Monterey Park
Planning Division
320 West Newmark Avenue
Monterey Park, California 91754

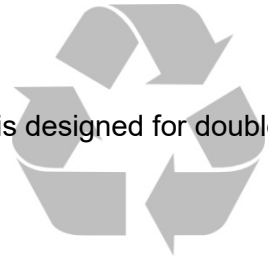
Prepared For:

The Commons of MPK, LLC.
Management Company:
Longo Realty, Inc.
812 South Atlantic Boulevard, #A
Monterey Park, California 91754

Prepared by:

MIG, Inc.
1650 Spruce Street, Suite 106
Riverside, CA 92507

Public Review Draft
May 20, 2024



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1 Introduction

The City of Monterey Park ("Lead Agency" or "City") received an application from Longo Realty Inc. ("project proponent") to construct a 64-unit condominium development (the "project") on a site located at 338, 400, and 410 South Alhambra Avenue (Assessor's Parcel Numbers: 5259-004-036, -037, & -038) in the City of Monterey Park, California. The application for the project includes Development Agreement, Tentative Map No. 84188, and Density Bonus Concessions for demolition of the existing residential dwelling units at the project site and construction of the proposed condominium units. The project requires review under the California Environmental Quality Act ("CEQA") (Public Resources Code Sections 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations Sections 15000, et seq.).

This Initial Study was prepared to assess the short-term, long-term, and cumulative environmental impacts that could result from approval of the proposed project. This report was prepared to comply with CEQA Guidelines Section 15063 which requires an Initial Study to include the following:

- A description of the project, including the location of the project (see Section 2)
- Identification of the environmental setting (see Section 2.10)
- Identification of environmental effects by use of a checklist, matrix, or other methods, provided that entries on the checklist or other form are briefly explained to indicate that there is some evidence to support the entries (see Section 4)
- Discussion of ways to mitigate significant effects identified, if any (see Section 4)
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls (see Section 4.11)
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study (see Section 6)

1.1 – Purpose of CEQA

Public Resource Code section 2100 provides as follows:

"The Legislature finds and declares as follows:

a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.
b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.
c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.
d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the state takes immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.
e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.
f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.
g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the

environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the State to:

h) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.
i) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.
j) Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.
k) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.
l) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.
m) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.
n) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment."

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Public Resource Code section 21002, quoted below:

"The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event that specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof."

1.2 – Public Comments

Written comments from all public agencies and individuals are invited regarding the information contained in this Initial Study and Mitigated Negative Declaration ("IS/MND"). Such comments should explain any perceived deficiencies in the assessment of impacts, identify the information that is purportedly lacking in the Initial Study or indicate where the information may be found. All comments on the IS/MND are to be submitted to:

Beth Chow, AICP, Interim Planning Manager
City of Monterey Park Planning Division
320 West Newmark Avenue
Monterey Park, California 91754
Phone: (626) 307-1318

Email: BChow@MontereyPark.ca.gov

Following a 20-day period of circulation and review of the IS/MND, all written comments will be considered by the City of Monterey Park before taking action on the project adopting the IS/MND.

1.3 – Availability of Materials

All materials related to the preparation of this Initial Study are available for public review at the City hall or available on the City's website homepage: http://www.montereypark.ca.gov/999/Featured-Projects. To request an appointment to review these materials at City hall, please contact Beth Chow, Interim Planning Manager, via telephone at (626) 307-1318 or via email at BChow@MontereyPark.ca.gov.

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2 Project Description

2.1 – Project Title

338-410 South Alhambra Avenue 64-Unit Condominium Project

2.2 – Lead Agency Name and Address

City of Monterey Park
Community Development Department, Planning Division
320 West Newmark Avenue
Monterey Park, California 91754

2.3 – Contact Person and Phone Number

Beth Chow, AICP, Interim Planning Manager
Phone: (626) 307-1318

2.4 – Project Sponsors' Name and Address

The Commons of MPK, LLC.
812 South Atlantic Boulevard, #A
Monterey Park, California 91754

Longo Realty, Inc.
812 South Atlantic Boulevard, #A
Monterey Park, California 91754

2.5 – Project Location

The approximately 1.73-acre project site is located on the east side of Alhambra Avenue, between East Newmark Avenue and East Graves Avenue, at the eastern terminus of Peach Street in the City of Monterey Park, California (See Exhibit 1, Regional Context Map). Interstate 10 ("I-10") is approximately 0.93 miles to the north, Interstate 710 ("I-710") is approximately 2.78 miles to the west, and State Route 60 ("SR-60") is approximately 1.86 miles to the south of the project site. The project site is surrounded by residential properties on all sides (See Exhibit 2, Project Vicinity Map).

- Latitude 34° 03' 28.43" North, Longitude 118° 06' 59.54" West
- Assessor's Parcel Numbers 5259-004-036, 5259-004-037, & 5259-004-038
- 338, 400, & 410 South Alhambra Boulevard, Monterey Park, California 91754

2.6 – General Plan Land Use Designation

The project site has a General Plan Land Use Designation of High Density Residential ("HDR") as described in the Land Use Element. The residential designation is intended to provide for a broad range of residential uses to meet the needs of Monterey Park residents.

2.7 – Zoning District

The Monterey Park Municipal Code ("MPMC") zoning regulations designate the project site as High Density Residential ("R-3"). The R-3 zone is intended to provide for a broad range of dwelling units which may be attached or detached. The maximum General Plan Land Use density for the R-3 designation is 30 dwelling units per acre.

2.8 – Surrounding Land Uses

The project site is surrounded on the north, east, and south by multi-family residential uses, and on the west, along South Alhambra Avenue with single-family residential development. Surrounding uses are summarized in Table 1 (Existing Land Uses).

Table 1
Existing Land Uses

Direction	General Plan Designation	Zoning District	Existing Land Use
Project Site	High Density Residential (HDR)	High Density Residential (R-3)	Combination of Single-family and Multi-family Residential
North	High Density Residential (HDR)	High Density Residential (R-3)	Single-family Residential (two story)
South	High Density Residential (HDR)	High Density Residential (R-3)	Multi-family Residential (two story)
East	High Density Residential (HDR)	High Density Residential (R-3)	Multi-family Residential (one & two story)
West	Medium Density Residential (MDR)	Medium-Multiple Residential (R-2)	Single-family Residential (one story)

2.9 – Environmental Setting

The property at 338 South Alhambra Avenue is developed with two (2) attached multi-family dwelling units. The property at 400 South Alhambra Avenue is developed with a 12-unit multi-family apartment complex. One of the units at this location is currently uninhabitable. The Property at 410 South Alhambra Avenue is developed with a single-family home and an accessory dwelling unit ("ADU"). In total, the project site is currently developed with 14 multi-family dwelling units (13 habitable units), one single-family home, and an ADU. Ornamental and non-native landscaping typical of residential development, including several trees, are located on the project site. Telephone lines run along the South Alhambra Avenue frontage for the site and extend east into the site at two locations; along the north boundary, and generally at the eastern terminus of Peach Street. The project site is relatively flat and slopes slightly from south to west. The site ranges in elevation from 375 feet to 385 feet above mean sea level (AMSL). The eastern portion of the project site slopes from an elevation of 382 feet along the eastern property line to 376 feet to the northern property line. Currently, access to the project site is provided via four driveways along South Alhambra Avenue.

2.10 – Project Description

The proposed project includes demolition of the existing residential structures, a Tentative Map to combine the three parcels into two new parcels of equal size, and construction of a residential development consisting of 64 multi-family condominium units along with associated parking and landscaping improvements (See Exhibit 3, Site Plan). The proposed condominiums would be divided

between two buildings, with eight attached 3-bedroom townhomes located in a two-story building along the project frontage and the remaining 57 condominium units arranged in the shape of a square surrounding a central courtyard area in the central/rear portion of the site (See Exhibit 4, Floor Plans). In total, the project proposes fifteen (15) 1-bedroom units, thirty-three (33) 2-bedroom units, and seventeen (16) 3-bedroom units. Fifty-seven (57) of the proposed residential units would be market rate while the remaining seven (7) units would be designated as very low-income housing units. Each level of the square condominium building contains five 1-bedroom units, eleven 2-bedroom units, and three 3-bedroom units.

Density Bonus Concessions

The project site is zoned High-Density Residential (R-3) and the surrounding area is zoned either Medium-Multiple Residential (R-2) or High-Density Residential (R-3).[1] As discussed in Section 2.7 above, the Maximum density for the R-3 designation is 30 dwelling units per acre. The zoning for the 1.73-acre site allows up to 43 dwelling units. In addition, Monterey Park Municipal Code (MPMC) Section 21.08.080 provides that no building within a residential designation can exceed two stories or 30 feet in height. MPMC Section 21.32.015 prohibits the issuance of a variance to increase the number of stories or increase the otherwise maximum height limitation. However, because the project would designate fifteen percent (15%) of the proposed units as very-low income housing, the project qualifies for an Affordable Housing density bonus of fifty percent (50%) (MPMC Section 21.18.060(D)) and height incentives up to 3 stories or 41 feet in height (MPMC Section 21.18.050). With the Affordable Housing density bonus concessions mandated under State law, the proposed project is allowed to develop up to 65 dwelling units. As previously described, the proposed project consists of 64 condominiums. Upon completion, the proposed development would be three stories and would have a maximum height of 38.7 feet at its highest point as measured from the Grade Plane (See Exhibit 5, Project Elevations).The project is allowed to exceed the City's maximum height limits pursuant to Monterey Park Ordinance No. 2198 (Measure JJ) and State law.

Parking

Each of the 3-bedroom townhomes located along the project frontage includes a two-car subterranean garage with two levels of living space above totaling 2,100 square feet. The 1-bedroom units located within the square building total 645 square feet, the 2-bedroom units total 1,000 square feet, and the 3-bedroom units total 1,300 square feet. The square building includes a semi-subterranean parking garage on the ground level with three levels of residential units above. The parking garage includes 83 passenger vehicle parking stalls for residents and guests with six of these spaces designated for electric vehicles and two spaces designated for ADA parking. The parking garage would also house the lobby/leasing office, an electrical room, a fire control room, and trash enclosures. The first level of the square building includes a community room and gym, while the second level will include a community room and business center, with the third level containing a roof top deck with open trellis.

Vehicular and Pedestrian Access

Vehicular access to the site would be provided via a 26-foot wide driveway at the northwest corner of the site and a 20-foot wide driveway at the southwest corner of the site. The driveways would provide direct access to the proposed townhome units along the project frontage and to the proposed subterranean parking garage under the square building. Pedestrian access to the site would be provided along the project site's frontage with South Alhambra Avenue.

Landscaping

The project would also include approximately 13,700 square feet of landscaped common open space around the edges of the site and an approximately 12,000-square foot central courtyard in the center of the square building. Ornamental trees and landscaping would be located in front of the proposed

building along the site's frontage with South Alhambra Avenue and along the building's setbacks with adjoining properties to the north and south.

Utility Connections

The proposed project would connect to existing facilities located within South Alhambra Avenue right-of- way. Electricity service is provided to the site by Southern California Edison. Water service is provided to the site by the City of Monterey Park Water Utility Division. Sewer service is provided by the Los Angeles County Sanitation District. Existing water and sewer lines are located under South Alhambra Avenue. The proposed project would connect to the main sewer line under South Alhambra Avenue. Utility undergrounding would be required.

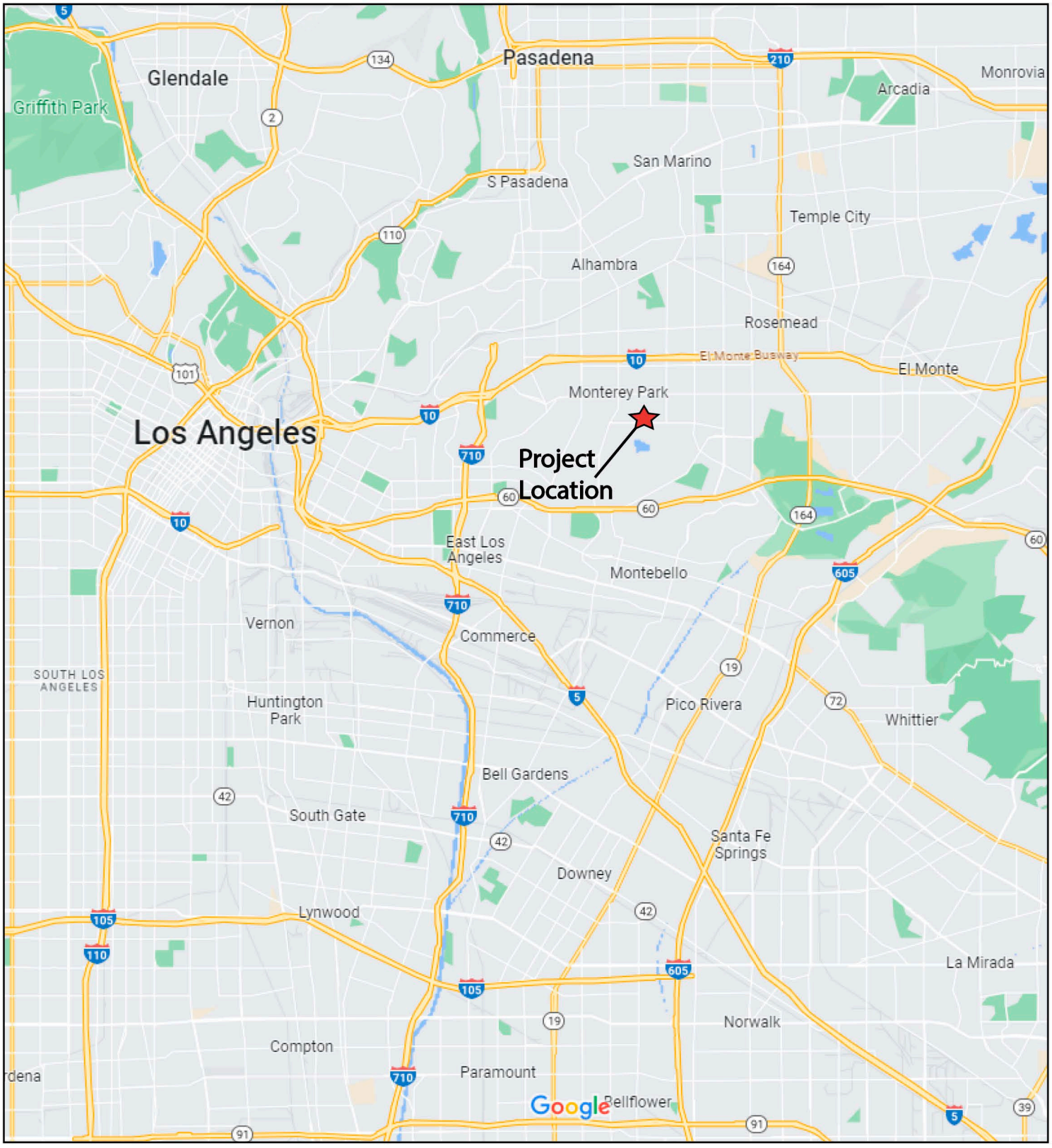
2.11 – Required Approvals

The City of Monterey Park is the only land use authority for this project requiring the following discretionary approvals:

- Design Review (Site and Building Development)
- Development Agreement
- Tentative Map 84188
- Density Bonus Concessions
    - Menu of Incentives Options:
        1. Increase building height/story by 11 feet/1 story
        2. Reduce rear setback by 5 feet (from 25 feet to 20 feet)
        3. Reduce private open space (balconies) to 10 feet by 6 feet

2.12 – Other Public Agencies Whose Approval is Required

None.



Not to Scale

Source: Google Maps

http://www.migcom.com • 951-787-9222

Exhibit 1 Regional Context Map

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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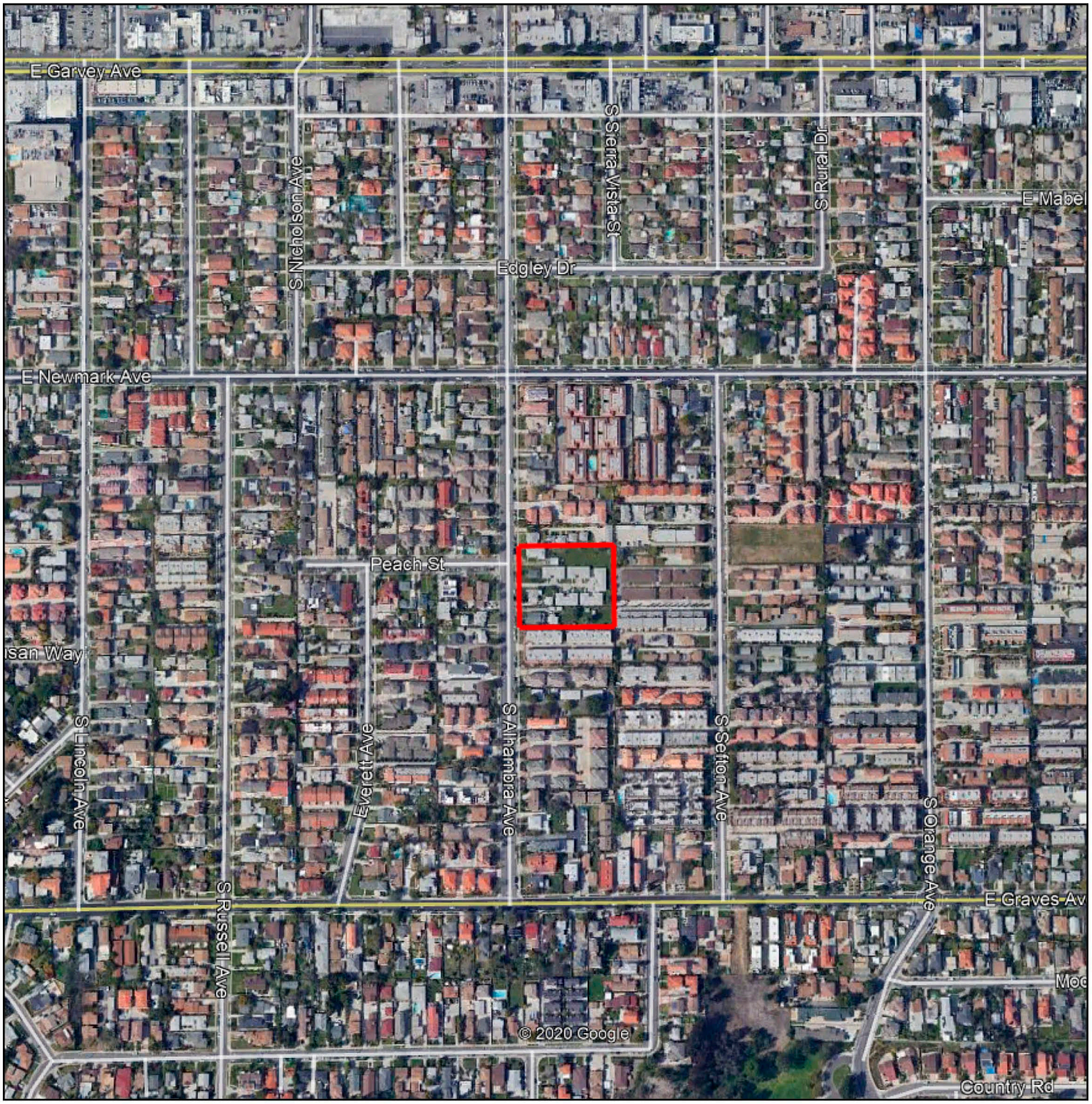

- Project Site

Not to Scale

Source: Google Earth

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Exhibit 2 Project Vicinity Map

338-410 S. Alhambra Ave. 64-Unit Condominium Project
Monterey Park, California

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Source: Tag Design Works

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Exhibit 3 Site Plan

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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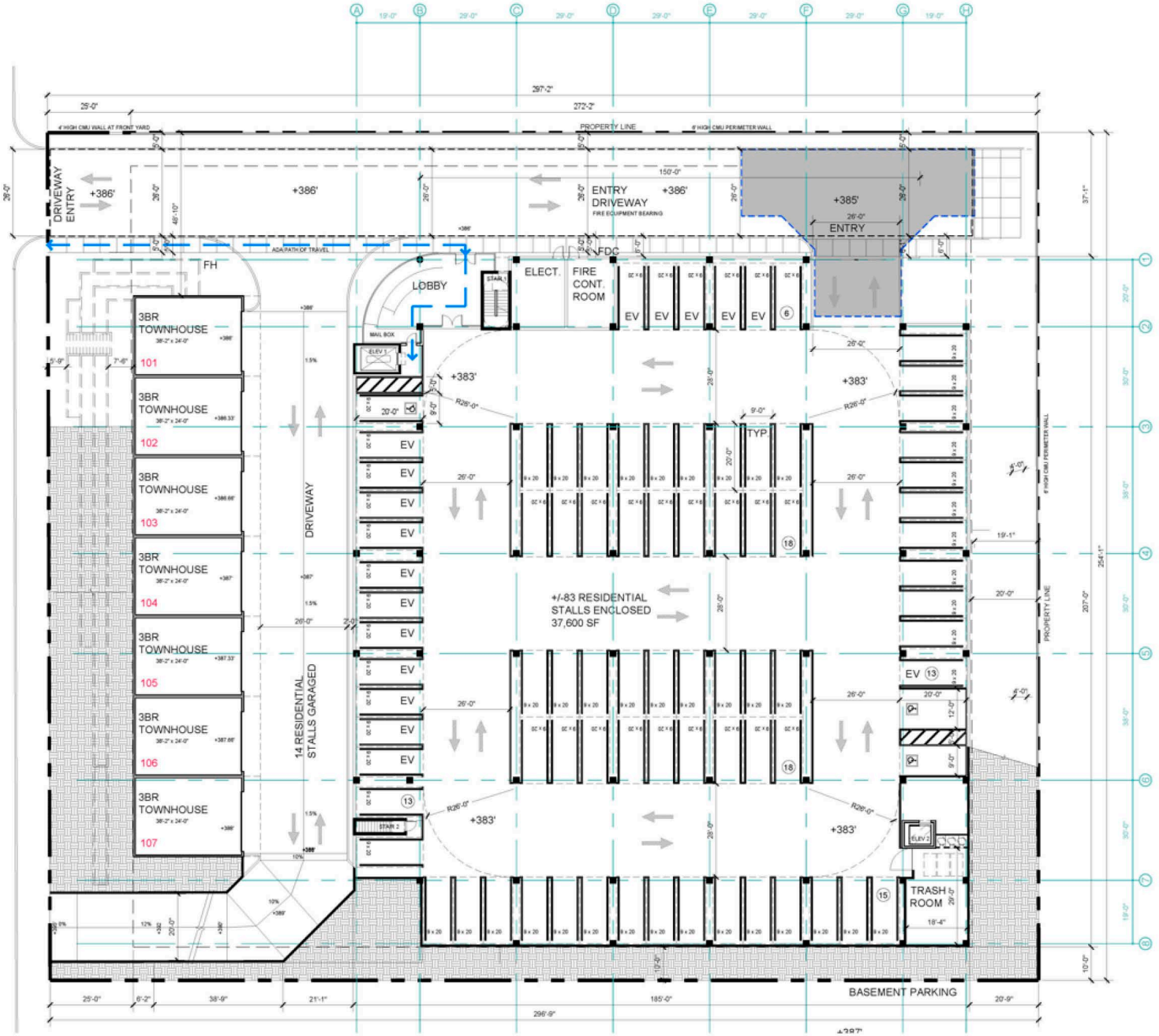

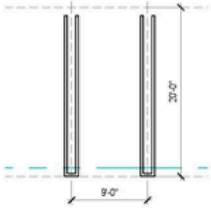

TYPICAL PARKING DIMENSIONS

ADA PATH OF TRAVEL

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Source: Tag Design Works

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Exhibit 4 Floor Plans (Level B1)

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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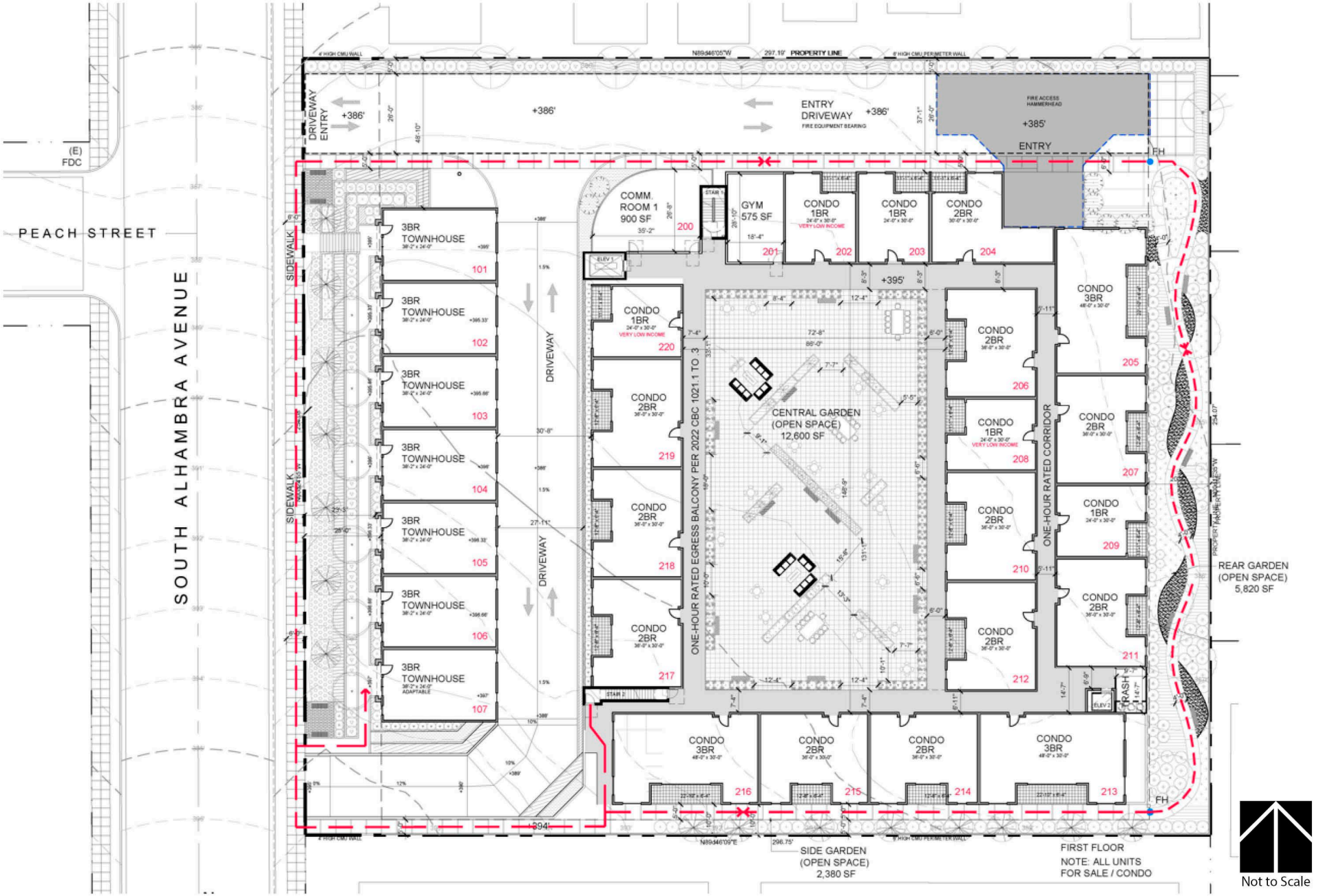

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Exhibit 4 Floor Plans (Level 1)

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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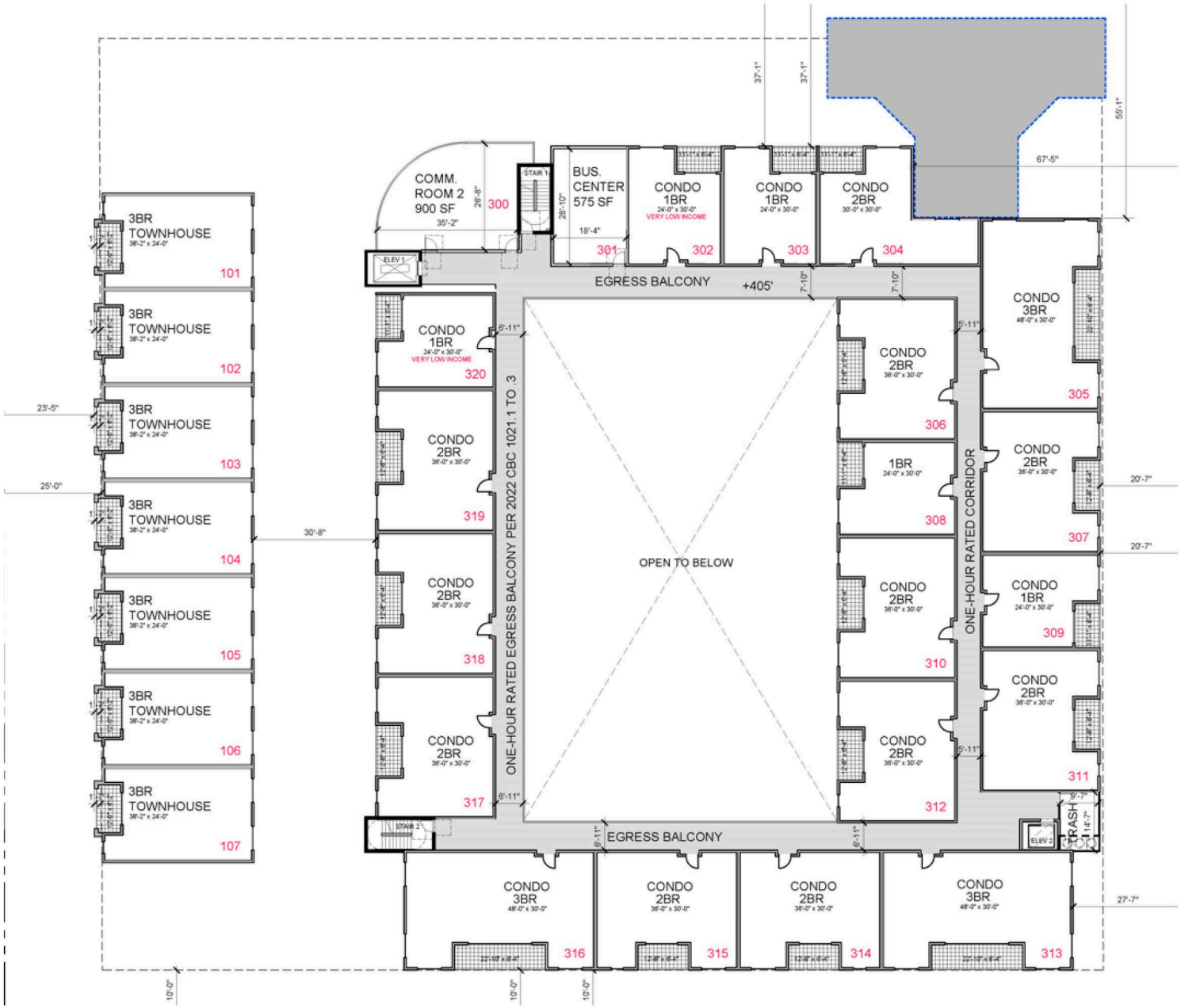

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Exhibit 4 Floor Plans (Level 2)

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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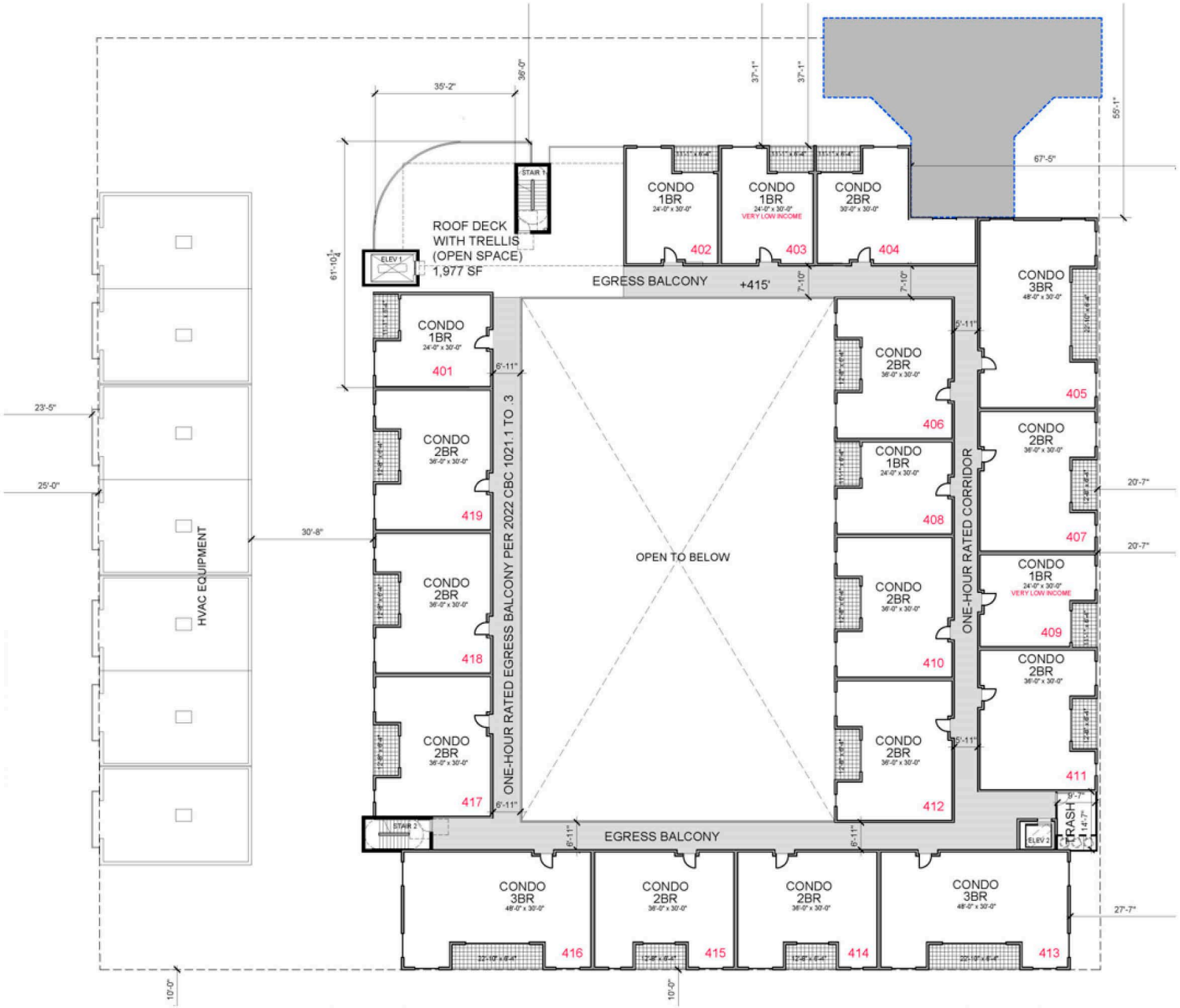

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Exhibit 4 Floor Plans (Level 3)

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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BUILDING ELEVATION: WEST

BUILDING ELEVATION: SOUTH

Source: Tag Design Works

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Exhibit 5 Project Elevations

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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BUILDING ELEVATION: EAST

BUILDING ELEVATION: NORTH

Source: Tag Design Works

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Exhibit 5 Project Elevations Cont.

338-410 S. Alhambra Ave. 64-Unit Condominium Project

Monterey Park, California

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3 Environmental Determination

3.1 – 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 Resources	☑	Air Quality
☑	Biological Resources	☑	Cultural Resources	☑	Geology /Soils
☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials	☐	Hydrology / Water Quality
☐	Land Use / Planning	☐	Mineral Resources	☑	Noise
☐	Population / Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities / Service Systems	☐	Mandatory Findings of Significance

3.2 – Determination

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.
☑	I find that although the proposed project could have a significant effect on the environment, there would 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 would 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.

Name: Beth Chow, AICP, Planning Manager Date

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4.1 – Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 view from 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?	☐	☐	☑	☐

a) No Impact. Scenic vistas can be impacted by development in two ways. First, a structure may be constructed that blocks the view of a vista. Second, the vista itself may be altered (i.e., development on a scenic hillside). There are no scenic vistas identified in the City of Monterey Park General Plan.[2] The proposed project is located on a developed site, south of the San Bernardino Freeway Interstate 10 (I-10) and north of the Pomona Freeway California State Route 60 (SR-60), within a fully developed area visually dominated by residential land uses and surface streets. The project site is not considered to be within or to comprise a portion of a scenic vista. The property at 338 South Alhambra Avenue is developed with two attached multi-family dwelling units. The property at 400 South Alhambra Avenue is developed with a 12-unit multi-family apartment complex. One of the units at this location is currently uninhabitable. The Property at 410 South Alhambra Avenue is developed with a single-family home and an accessory dwelling unit (ADU). In total, the project site is currently developed with 14 multi- family

dwelling units (13 habitable units), one single-family home, and an ADU. Therefore, the proposed project would result in no impact with respect to views of a scenic vista.

b) No Impact. The project is not adjacent to a designated state scenic highway or eligible state scenic highway as identified on the California Scenic Highway Mapping System. Neither South Alhambra Avenue, nor other streets in the project vicinity are listed in the City of Monterey Park General Plan for consideration as scenic highways. The nearest State scenic highway is the Angeles Crest Highway (State Route 2), located approximately 12.5 miles to the northwest of the project site.[3] The project site is located in a fully developed, urbanized area, and contains no scenic resources. Therefore, no impact to scenic resources visible from a state scenic highway would occur.

c) No Impact. The project site is zoned High-Density Residential (R-3) and the surrounding area is zoned either Medium-Multiple Residential (R-2) or High-Density Residential (R-3). As discussed in Section 2.7 above, the Maximum density for the R-2 and R-3 designations is 25 dwelling units per acre. As such, the zoning for the 1.73-acre site allows up to 43 dwelling units. In addition, MPMC Section 21.08.080 provides that no building within a residential designation can exceed two stories or 30 feet in height. However, because the project would designate fifteen percent (15%) of the proposed units as very-low income housing, the project would qualify for an Affordable Housing density bonus of fifty percent (50%) (MPMC Section 21.18.060(D)) and height incentives up to 3 stories or 41 feet in height (MPMC Section 21.18.100). With the Affordable Housing density bonus, the proposed project is allowed to develop up to 65 dwelling units. As previously described, the proposed project consists of 64 condominiums. Upon completion, the proposed development would be three stories and would have a maximum height of 38.7 feet at its highest point (as measured from the Grade Plane). Therefore, the proposed project would not conflict with the applicable zoning regulating the height of developments. The proposed project site is located in an urbanized area and there are no regulations governing scenic quality in the City of Monterey Park. No impact would occur.

d) Less Than Significant Impact. Excessive or inappropriately directed lighting can adversely impact night-time views by reducing the ability to see the night sky and stars. Glare can be caused from unshielded or misdirected lighting sources. Reflective surfaces (e.g., polished metal) can also cause glare. Impacts associated with glare range from simple nuisance to potentially dangerous situations (e.g., if glare is directed into the eyes of motorists). There are lighting sources adjacent to the project site, including free-standing streetlights, light fixtures on buildings, and pole-mounted lights. The proposed project includes exterior security lighting and interior building lighting throughout the site. MPMC Section 21.08.080(U) requires outdoor lighting to be arranged so as to reflect light away from any other property. The proposed project must comply with the MPMC and these regulations make the project's lighting impacts less than significant. Sources of daytime glare are typically concentrated in commercial areas and are often associated with retail uses. Glare results from development and associated parking areas that contain reflective materials such as hi-efficiency window glass, highly polished surfaces, and expanses of pavement. The proposed project site is located in area that developed completely with residential uses. The proposed condominiums include design features that would result in minimal use of glare-inducing materials. Therefore, reflective glare impacts would be less than significant.

4.2 – Agriculture and Forest Resources

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 significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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 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 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) No Impact. The proposed project is located in a fully developed, residential, suburbanized areathat does not contain agricultural or forest uses. The map of Important Farmland in California (2016) prepared by the Department of Conservation does not identify the project site as being Prime Farmland,

Unique Farmland, or Farmland of Statewide Importance.[4] The City of Monterey Park is located in an area that is not mapped, indicating that there is no land considered as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the City. In addition, the General Plan does not identify any areas for agriculture use. Therefore, there would be no conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance to a non-agricultural use as a result of this project. No impact would occur.

b) No Impact. No Williamson Act contracts are active for the project site.[5] In addition, the project site is zoned high-density residential, which does not permit agricultural uses. Therefore, there would be no conflict with existing zoning for agricultural use or a Williamson Act contract. No impact would occur.

c) No Impact. CEQA Section 12220(g) identifies forest land as *land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.* The project site and surrounding properties are not currently being managed or used for forest land as identified in CEQA Section 12220(g). The project site has already been graded and developed with residential uses with no substantial native vegetation onsite. Developing this project would have no impact on any timberland zoning.

d) No Impact. The project site is land that has been previously developed with residential uses and limited ornamental landscaping; thus, there would be no loss of forest land or conversion of forest land to non-forest use as a result of this project. No impact would occur.

e) No Impact. The project site is a previously developed site within a suburban environment. The project is surrounded by other residential uses. None of the surrounding sites contain existing forest uses. Development of this project would not change the existing environment in a manner that would result in the conversion of forest land to a non-forest use. No impact would occur.

4.3 – Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☑	☐

An *Air Quality Impact Analysis Report* was prepared for the proposed project by MIG, dated April 2023 (see Appendix A). The report estimates the potential air quality emissions for the proposed project and evaluates project emissions against applicable South Coast Air Quality Management District (SCAQMD)-recommended California Environmental Quality Act (CEQA) significance thresholds for construction and operation. A *Transportation Study Screening assessment* was prepared for the proposed project by Ganddini Group, dated February 10, 2023 (see Appendix H).

a) Less than Significant Impact. The proposed project is located within the South Coast Air Basin (Basin), where efforts to attain state and federal air quality standards are governed by the South Coast Air Quality Management District (SCAQMD). Both the State of California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as criteria pollutants). These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and lead (Pb). The state has also established AAQS for additional pollutants. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the state and federal standards differ, California AAQS (CAAQS) are more stringent than the national AAQS (NAAQS).

The U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), and the SCAQMD assess the air quality of an area by measuring and monitoring the amount of pollutants

in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories:

- **Attainment.** A region is "in attainment" if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a "maintenance area" for 10 years to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- **Unclassified.** An area is unclassified if the ambient air monitoring data is incomplete and does not support a designation of attainment or nonattainment.

Table 2 (South Coast Air Basin (Non-Desert) Attainment Status) summarizes the Basin's attainment status for criteria air pollutants. The Basin is currently in nonattainment for state and federal ozone, state PM_{10}, and state and federal $PM_{2.5}$ standards.

Table 2
South Coast Air Basin (Non-Desert) Attainment Status

Pollutant	State Designation	Federal Designation
O_3 (1-hr)	Nonattainment	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment (Maintenance)
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Pb	--	Nonattainment (Partial)
Hydrogen Sulfide	Attainment	--
Sulfates	Attainment	--
Vinyl Chloride	Attainment	--
Sources: SCAQMD, 2018		

A project that conflicts with or obstructs the implementation of the SCAQMD South Coast Air Basin 2022 Air Quality Management Plan (AQMP) could hinder implementation of the AQMP, delay efforts to meet attainment deadlines, and/or interfere with SCAQMD efforts to maintain compliance with, and attainment of, applicable air quality standards. Pursuant to the methodology provided in Chapter 12 of the SCAQMD *CEQA Air Quality Handbook*[6], consistency with the AQMP is affirmed if the project:

1) Is consistent with the growth assumptions in the AQMP; and
2) Does not increase the frequency or severity of an air quality standard, violation, or cause a new one.

Consistency Criterion 1 refers to the growth forecasts and associated assumptions included in the 2022 AQMP. The 2022 AQMP was designed to achieve attainment for all criteria air pollutants within the Basin while still accommodating growth in the region. Projects that are consistent with the AQMP growth

assumptions would not interfere with attainment of air quality standards, because this growth is included in the projections used to formulate the AQMP. The proposed Project would generate approximately 50 new residential units by building a 64-unit housing facility and demolishing 16 existing residential units. This would fall within the SCAG 2020 RTP/SCS growth projections for the City of Monterey Park (i.e., 2,200 new households and 4,100 residents between 2016 and 2045; SCAG, 2020). Therefore, the proposed Project would not exceed the growth assumptions contained in the AQMP. Impacts would be less than significant.

Consistency Criterion 2 refers to the CAAQS. In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable. As described in response 4.3.b below, the proposed Project would not generate construction or operational emissions in excess of SCAQMD criteria air pollutant thresholds. Impacts would be less than significant.

b) Less than Significant Impact. A project may have a significant impact if project-related emissions exceed federal, state, or regional standards or thresholds, or if project-related emissions would substantially contribute to existing or projected air quality violations. The proposed project would generate both short-term construction emissions and long-term operational emissions. As described in more detail below, the proposed project would not generate emissions levels that exceed SCAQMD-recommended pollutant thresholds.

Construction Emissions

Construction of the proposed project would generate equipment exhaust and dust emissions from demolition activities, ground disturbing activities such as site preparation and grading, and the use of gasoline- and diesel-fuel combustion in on- and off-site heavy duty construction equipment, worker vehicle trips, vendor vehicle trips, and haul truck trips, ground disturbing activities. The proposed project's potential construction emissions were modeled using CalEEMod, Version 2022.1.1.6. The construction phases, duration, and the type and amount of equipment used during construction was generated using CalEEMod default assumptions, and modified to reflect the following project-specific characteristics:

- **Construction Phase** durations were altered per the project proponent's construction schedule. The changes are as follows:
    - **Demolition Phase** was reduced from 20 days (default) to 10 days;
    - **Grading Phase** was extended from 4 days (default) to 20 days to account for additional time that may be required to excavate for the subterranean parking garage;
    - **Trenching Phase** was added to reflect construction operations;
    - **Building Construction Phase** was separated from one phase that was 200 days (default) into two phases, Building Construction (Foundation) and Building Construction (Vertical). Building Construction (Foundation) was 30 days and Building Construction (Vertical) was 360 days;
- **Construction Equipment** was adjusted to reflect the quantity and daily runtime associated with equipment operation during development activities.
- **Off-haul** of approximately 9,000 cubic yards of soil during the grading phase to account for spoils that would be generated while excavating for the subterranean parking garage was added.

- **Vendor Trips per Day** were increased from 14 trips/day to 30 trips/day for the Building Construction (Foundation) phase in order to account for potential concrete deliveries.

The proposed project's maximum daily unmitigated construction emissions are shown in Table 3 (Unmitigated Construction Emissions Estimates). The construction emissions estimates incorporate measures to control and reduce fugitive dust as required by SCAQMD Rule 403, but do not incorporate mitigation measures.

Table 3
Unmitigated Maximum Daily Regional Construction Emissions

Season and Year	Maximum Daily Emissions (lbs./day)					
	ROG	NOX	CO	SO2	PM10(A)	PM2.5(A)
Summer 2023	0.8	11.9	10.5	<0.1	1.8	0.7
Winter 2023	1.4	10.0	14.5	<0.1	1.1	0.6
Summer 2024	1.3	9.5	14.8	<0.1	1.3	0.6
Winter 2024	1.3	9.6	14.0	<0.1	1.3	0.6
Winter 2025	68.3	9.0	13.6	<0.1	1.3	0.5
SCAQMD CEQA Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: MIG, 2023 (see Appendix A) and SCAQMD 2020.
(A) PM_{10} and $PM_{2.5}$ emissions estimates include application of control measures as required by SCAQMD Rule 403, including watering exposed areas three times (3x) daily and cleaning paved roads.

As shown in Table 3, the proposed project's maximum daily unmitigated construction emissions would be below the SCAQMD's regional pollutant thresholds for all pollutants. This evaluation of construction emissions is conservative, as the construction emissions estimates do not include the emission reductions that would occur with Mitigation Measure AIR-1 identified in the construction health risk assessment discussed in response 4.3.c, below. These emissions reductions would primarily lower the NO_x and PM exhaust emissions that are estimated to occur during construction. Therefore, the construction of the proposed project would not generate construction-related emissions that exceed SCAQMD CEQA thresholds.

Operational Emissions

Once operational, the proposed project would generate emissions from the following sources:

- **Small "area" sources** including landscaping equipment and the use of consumer products such as paints, cleaners, and fertilizers that result in the evaporation of chemicals to the atmosphere during product use.
- **Energy use** in the form of natural gas combustion for building water and space heating needs.
- **Mobile sources** including trips made to and from the site by new residents and visitors.

Similar to construction emissions, criteria air pollutant emissions were estimated in CalEEMod, Version 2022.1.1.6 based on default model assumptions, with the following modifications made to reflect project-specific characteristics:

- **Area Sources:** Woodstoves and fireplaces were removed pursuant to SCAQMD Rule 445.

The quantity of wood-burning fireplaces assumed by CalEEMod were added to natural-gas powered fireplaces.

- **Mobile Sources:** The default, weekday trip generation rate for the proposed land use was updated to reflect the trip generation rate provided in the Transportation Study Screening Analysis prepared for the proposed project by Ganddini Group (Ganddini Group 2023; see Table 2-1 of Appendix H). The average vehicle miles travelled (VMT) distance for the proposed project identified in the Transportation Study Screening Analysis was also inputted into the model.

The proposed project's maximum daily unmitigated operational emissions are shown in Table 4 (Operational Emissions Estimates). The emissions presented are for the proposed project's first year of operation, which is presumed to be 2025.

Table 4
Unmitigated Maximum Daily Regional Operational Emissions

Source	Maximum Daily Pollutant Emissions (Pounds Per Day)[(A)]					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	3.1	1.0	6.1	<0.1	0.1	0.1
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Mobile	1.7	2.3	24.7	0.1	2.3	2.3
Total Project Emissions[(B)]	***4.8***	***3.5***	***30.9***	***0.1***	***2.4***	***2.4***
SCAQMD CEQA Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: MIG, 2023 (see Appendix A)
(A) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. Maximum daily ROG, CO, SO_X emissions occur during the summer. Maximum daily NO_X emissions occur during the winter. In general, due to rounding, there is no difference between summer and winter PM_{10} and $PM_{2.5}$ emissions levels for the purposes of this table.
(B) Totals may not equal due to rounding.

As shown in Table 4, the proposed project's maximum daily, unmitigated operational criteria air pollutant emissions would be well below the SCAQMD's-recommended regional criteria air pollutant thresholds. Project operation, therefore, would not generate criteria air pollutant emissions levels that exceed SCAQMD regional CEQA thresholds. This impact would be less than significant.

Conclusion

The Basin is currently designated non-attainment for State and/or federal standards for ozone, $PM_{10,}$ and $PM_{2.5}$. As discussed in the preceding subsections, the proposed project would not result in construction or operational emissions of criteria air pollutants that exceed SCAQMD thresholds of significance. In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable. The SCAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. Since the proposed project would not individually exceed any SCAQMD CEQA significance thresholds, it would not result in a cumulatively considerable increase in regulated, nonattainment pollutants.

c) Less than Significant with Mitigation Incorporated. The proposed project would generate both short-term construction emissions and long-term operational emissions that could impact sensitive residential receptors located near the project; however, as described in more detail below, the proposed project would not generate short-term or long-term emissions that exceed SCAQMD-recommended localized significance thresholds or result in other substantial pollutant concentrations with the incorporation of mitigation measures.

Localized Significance Thresholds (LST) Analysis

Construction Emissions

Sensitive receptors are located north, south, east, and west of the project site. Consistent with the SCAQMD's LST methodology, the emissions included in the construction LST analysis are onsite emissions only, and the LST thresholds against which these onsite emissions are compared are based on the project size, in acres. The LST thresholds are for SRA 11 (South San Gabriel Valley), the SRA in which the proposed project is located, and are based on a receptor distance of 25 meters (82 feet), the closest LST receptor distance threshold recommended for use by the SCAQMD, and a project site of 2 acres. The emissions presented in Table 5 (LST Construction Analysis) incorporate certain best available control measures the project would be subject to pursuant to SCAQMD Rule 403, Fugitive Dust. Specifically, the CalEEMod project file applies an approximate 55 percent reduction in PM_{10} and $PM_{2.5}$ fugitive dust emissions through site watering (two times daily) and replacement of ground cover. These estimated reductions are consistent with the reductions realized by implementation of the numerous best available control measures contained in SCAQMD Rule 403.

Table 5
LST Construction Analysis

Construction Phase	Maximum Daily Emissions (Pounds per Day)(A)			
	NO_X	CO	PM_{10}(B)	$PM_{2.5}$(B)
Demolition 2023	4.6	4.8	1.5	0.4
Site Preparation 2023	1.3	2.1	0.1	0.1
Grading 2023	11.9	10.6	1.8	0.7
Trenching 2023	1.1	1.3	0.1	0.1
Building Construction (Foundation) 2023	3.2	8.2	1.2	0.4
Building Construction (Vertical) 2023	10.0	14.5	1.4	0.6
Building Construction (Vertical) 2024	9.6	14.8	1.3	0.6
Building Construction (Vertical) 2025	9.0	13.6	1.3	0.5
Paving 2025	2.8	4.2	0.2	0.1
Architectural Coating 2025	1.0	2.7	0.4	0.1
SCAQMD LST Threshold (1-Acre)	**83**	**673**	**5**	**4**
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: MIG 2023 (see Appendix A)

(A) Emissions presented are worst-case total emissions and may reflect summer or winter emissions levels.

(B) PM emissions assume compliance with SCAQMD Rule 403 best available control measures for site watering and replacing ground cover.

As shown in 5, the maximum daily onsite emissions generated during all construction phases associated with the project would be below the SCAQMD's LST thresholds for a two-acre site at a distance of 82 feet (approximately 25 meters), the closest LST receptor distance threshold recommended for use by the SCAQMD. Therefore, impacts would be less than significant.

Operational Emissions

The project's maximum daily operational emissions are compared against the SCAQMD's-recommended LSTs in Table 6 (LST Operational Emissions). Consistent with the SCAQMD's LST methodology, the emissions included in the operational LST analysis are onsite emissions only, and the LST thresholds against which these onsite emissions are compared are based on the project size, in acres. The LST thresholds are for SRA 11 (South San Gabriel Valley), the SRA in which the project

is located and are based on a receptor distance of 82 feet (approximately 25 meters), the closest LST receptor distance threshold recommended for use by the SCAQMD.

Table 6
LST Operational Emissions

Emissions	Maximum Daily Emissions (Pounds per Day)[A]			
	NO_X	CO	PM_{10}[B]	$PM_{2.5}$[B]
Area Sources	1.0	6.1	0.1	0.1
Energy Sources	0.0	0.0	0.0	0.0
Mobile Sources[A]	2.3	24.7	<0.1	<0.1
Total Emissions[B]	**3.3**	**30.8**	**0.1**	**0.1**
SCAQMD LST Threshold[C]	**121**	**1,031**	**2**	**2**
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: MIG 2023 (see Appendix A).

(A) Mobile source emissions estimates reflect potential onsite vehicle emissions only and were derived by assuming 2% of operational mobile source emissions in Table 4 will occur onsite.

(B) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. In general, due to rounding, there is no difference between summer and winter emissions levels for the purposes of this table.

(C) LST threshold is based on a 2.0-acre project size and 25-meter (82-foot) receptor distance.

As shown in Table 6, the maximum daily onsite emissions generated during operation of the proposed project would not exceed the SCAQMD's recommended LST thresholds. Therefore, impacts would be less than significant.

Construction Health Risk Assessment

As previously noted, sensitive receptors are located north, south, east, and west of the project site. The proposed project would generate DPM, a TAC, from combustion of diesel fuel in heavy-duty construction equipment and trucks used to access the site during construction. The project would involve different construction activities occurring at different intensities over an approximately 19-month timeframe, with initial groundbreaking taking place potentially as early as Fall of 2024. Receptors would be exposed to varying concentrations of pollutants throughout the construction period. Due to the proposed project's close proximity to adjacent sensitive receptors, construction exhaust emissions of DPM would likely have the potential to result in incremental cancerogenic health risk increases that are in excess of the SCAQMD's threshold of 10 excess cancers in a million. To reduce potential DPM exhaust emissions generated by project construction activities, **Mitigation Measure AIR-1** is included to ensure the proposed project does not generate TAC emissions that have the potential to result in substantial adverse health effects at receptor locations near the proposed project. Implementation of **Mitigation Measure AIR-1** would reduce the amount of DPM that adjacent receptors would be exposed to by approximately 51 percent and reduce the potential for substantial pollutant concentrations and adverse health risks resulting from construction-related DPM emissions to a less than significant level.

CO Hotspot Analysis

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near high volume intersections. Several screening procedures have been developed by air districts throughout the state to assess whether a project may result in a CO impact. For example, the Bay Area Air Quality Management District (BAAQMD) developed a screening threshold in 2010

which states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis. Additionally, the SCAQMD's 2003 AQMP and *1992 Federal Attainment Plan for Carbon Monoxide* demonstrated that CO levels were below the CAAQS at an intersection with a daily traffic volume of up to approximately 100,000 vehicles per day. The proposed project would add approximately 331 new vehicle trips to the roadway system per day (see Appendix H). The worst-case hourly intersection volume in the project vicinity would be relatively unaffected by the project, which is projected to add a total of 20 trips during the AM peak hour and 25 trips during the PM peak hour. This is well below the BAAQMD screening threshold, and surrounding roadway segments would not have traffic volumes exceeding 100,000 vehicles per day. The proposed project would not cause intersection volumes to exceed any daily (100,000) or hourly (44,000) screening vehicle volumes maintained by the SCAQMD and other regional air districts and, therefore, would not result in significant CO concentrations. Impacts would be less than significant.

Conclusion

The proposed project's construction and operational criteria air pollutant emissions would be below the SCAQMD's LSTs, and additional traffic and associated emissions generated by the project would not cause a CO hot spot. The proposed project's PM_{10} exhaust emissions (i.e., DPM) could, however, result in incremental cancerogenic risk increases that exceed the SCAQMD's threshold. The project is required to incorporate **Mitigation Measure AIR-1**, which requires all off-road equipment with a rated power-output of 50 horsepower or greater to meet Tier IV emission standards. Alternatively, the project proponent may conduct a new construction health risk assessment once additional details are known regarding construction activities that would occur at the site, and identify new construction equipment limitations/requirements such that project health risks remain below the SCAQMD threshold. With the implementation of **Mitigation Measure AIR-1**, the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

d) Less than Significant Impact. According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed project does not include such sources but would result in the construction of a new condominium complex and parking garage that could generate odors related to vehicle parking and refuse collection (e.g., oils, lubricants, fuel vapors, short-term waste odors). These activities would not generate sustained odors that would affect substantial numbers of people. This impact would be less than significant.

Mitigation Measures

AIR-1: **Reduce Construction-Related DPM Emissions.** To reduce potential short-term adverse health risks associated with PM_{10} exhaust emissions generated during project construction activities, including emissions of diesel particulate matter (DPM), the project proponent and/or it's designated contractors, contractor's representatives, or other appropriate personnel to implement the following construction equipment restrictions for the project:

1. Contractors must use the smallest size equipment capable of safely completing work activities.
2. Electric hook-ups must be provided for stationary equipment (e.g., pumps, compressors, welding sets).
3. The use of portable diesel generators must be prohibited at the project site.

4. All construction equipment with a rated power-output of 50 horsepower or greater must meet U.S. EPA and CARB Tier IV Final Emission Standards for PM_{10}. This may be achieved via the use of equipment with engines that have been certified to meet Tier IV emission standards, or through the use of equipment that has been retrofitted with a CARB-verified diesel emission control strategy (e.g., particulate filter) capable of reducing exhaust PM_{10} emissions to levels that meet Tier IV standards.

As an alternative to using equipment that meets Tier IV Final Emissions Standards for off-road equipment with a rated power-output of 50 horsepower or greater, the project proponent may prepare and submit a refined construction health risk assessment to the City once additional project-specific construction information is known (e.g., specific construction equipment type, quantity, engine tier, and runtime by phase). The refined health risk assessment must demonstrate and identify any measures necessary such that the proposed project's incremental cancerogenic health risk at nearby sensitive receptor locations is below the applicable SCAQMD threshold of 10 cancers in a million.

4.4 – Biological Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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 US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (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) Less Than Significant Impact. The project site is a developed and occupied residential property within the City. The project site is not identified as critical habitat for any threatened or endangered species. The California Natural Diversity Database (CNDDB) shows no record of any occurrence of any sensitive plant, animal, terrestrial natural community, or aquatic community on the project site.[7] Landscaping currently exists onsite; however, the ornamental vegetation is not native habitat for any species identified as a candidate, sensitive, or special status species. Onsite vegetation includes landscape ornamental trees, grasses, and mature oak coast live trees. Considering the highly developed project site and lack of native habitat onsite, the proposed project would not result in any significant impacts to sensitive species or their habitats. The highly disturbed nature of the site and surrounding habitat would not provide substantial habitat for any of the sensitive species known to occur within one mile of the project site. Therefore, the proposed project would not have a substantial adverse effect on any species identified as a candidate, sensitive, or special-status species in local or regional plans by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). Impacts would be less than significant.

b) No Impact. No water features occur within the project site and no riparian vegetation occurs within the project site that could be habitat for wildlife.[8] Therefore, the project would not 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 CDFW or USFWS. No impact would occur.

c) No Impact. No wetlands occur on the project site.[9] Therefore, the project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act. No impact would occur.

d) Less than Significant with Mitigation Incorporated. The City does not maintain any wildlife corridors and the project site is surrounded by developed residential properties. However, the project site may still contain trees that support nesting habitat for native avian species and the project proposes removal of trees during construction. The Federal Migratory Bird Treaty Act (MBTA; 16 USC Sections 703–711) and California Fish and Game Code (CFGC) Sections 3503, 3503.5, and 3513 extend protection to many avian species known to occur within the project site. Therefore, **Mitigation Measure BIO-1** has been incorporated to ensure impacts to nesting/migratory birds are less than significant. With mitigation incorporated, impacts would be less than significant.

e) Less than Significant Impact. Construction of the proposed project would result in the removal of several fruit and non-native tree species from the site. Removal of trees from the project site must be performed in accordance with MPMC Section 9.63 (Property Damage), which prohibits damaging street trees. Furthermore, all trees within the existing South Alhambra Right-of-way would require evaluation and permits for tree removal in accordance with MPMC Section 9.63.060. Therefore, compliance with local regulations related to the removal of trees would ensure that impacts would remain less than significant.

f) No Impact. The project site is located in a residential area within the City of Monterey Park. The project site is zoned for residential use and includes three parcels of land that are developed

and would be replaced with another residential use. No Habitat Conservation Plan, Natural Community Conservation Plan or other biological plan are associated with the project site.[10] Therefore, the project would not 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 would occur.

Mitigation Measures

BIO-1: If vegetation removal is scheduled during the nesting season (typically February 1 to September 1), then a focused survey for active nests must be conducted by a qualified biologist not more than five days before the beginning of project-related activities (e.g., demolition, excavation, grading and vegetation removal). Surveys must be conducted in proposed work areas, staging and storage areas, and soil, equipment, and material stockpile areas. For passerines and small raptors, surveys must be conducted within a 250-foot radius surrounding the work area (in non-developed areas and where access is feasible). For larger raptors, such as those from the genus *Buteo*, the survey area must encompass a 500-foot radius. Surveys must be conducted by a qualified biologist during weather conditions suited to maximize the observation of possible nests and concentrate on areas of suitable habitat. If a lapse in project-related work of five days or longer occurs, an additional nest survey is required before work can be reinitiated. If nests are encountered during any preconstruction survey, a qualified biologist must determine if it may be feasible for construction to continue as planned without impacting the success of the nest, depending on conditions specific to each nest and the relative location and rate of construction activities. Any nest(s) within the project site must be monitored by a qualified biologist, as determined in the sole and absolute discretion of the City, during vegetation removal if work is occurring directly adjacent to the pre-determined no-work buffer. If the qualified biologist determines construction activities have potential to adversely affect a nest, the biologist will immediately inform the construction manager to halt construction activities within minimum exclusion buffer of 50 feet for songbird nests, and 200 to 500 feet for raptor nests, depending on species and location. Construction activities within the no-work buffer may proceed after a qualified biologist determines the nest is no longer active due to natural causes (e.g., young have fledged, predation or other non-anthropogenic nest failure).

4.5 – Cultural Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	☐	☑	☐	☐
c) Disturb any human remains, including those interred outsides of formal cemeteries?	☐	☑	☐	☐

a) No Impact. This project site does not satisfy any of the criteria for a historic resource defined in CEQA Guidelines Section 15064.5. There no known historic resources existing within the project boundaries or within a one-half mile radius of the project site. The historic resources records search of the project area shows there are two (2) historic built environments (P19-187961: religious structure/church and P-19-19-0254: commercial building) located within a one half-mile radius of the project site (see Appendix B). However, neither of these historic structures would be impacted by the proposed project either directly or indirectly. In addition, the City of Monterey Park does not have any structures eligible for listing in the National or California Registers under any of the significance criteria. Therefore, the project would not result in an adverse change in the significance of a historical resource as defined in CEQA Section15064.5. No impact would occur.

b) Less than Significant with Mitigation Incorporated. Given the urbanized nature of the project vicinity, previously undiscovered archaeological resources are not anticipated to be uncovered during project construction activities. In addition, there are no known archaeological resources existing within the project boundaries or within a one-half mile radius of the project site. However, in the unlikely event that archaeological resources, specifically those that are potentially related to the Gabrieleño Band of Mission Indians-Kizh Nation are discovered during ground-disturbing activities, **Mitigation Measures CUL-1** through **CUL-4** have been incorporated to ensure that buried archaeological resources are properly treated. With implementation of **Mitigation Measures CUL-1** through **CUL-4**, impacts to archaeological resources would be less than significant.

c) **Less than Significant with Mitigation Incorporated.** No known human remains are anticipated to be located on or beneath the project site. A number of regulatory provisions address the handling of human remains inadvertently uncovered during excavation activities. These include Health and Safety Code Section 7050.5, Public Resources Code (PRC) Section 5097.98, and CEQA Guidelines Section 15064.5(e). Pursuant to these codes, in the event of the discovery of unrecorded human remains during construction, excavations must be halted and the County Coroner must be notified. If the human remains are determined to be Native American, the California Native American Heritage Commission (NAHC) would be notified within 24 hours and the guidelines of the NAHC would be adhered to in the treatment and disposition of the remains. Compliance with these regulatory protocols would ensure that

impacts on human remains would be less than significant, and this issue need not be evaluated further. In addition, in the unlikely event that human remains are uncovered during ground disturbing activities, **Mitigation Measures CUL-5** through **CUL-8** have been incorporated to ensure that human remains are properly treated in accordance with existing regulations. With incorporation of mitigation, impacts related to the discovery of buried human remains would be less than significant.

Mitigation Measures

CUL-1: **Retain a Native American Monitor/Consultant:** The project proponent is required to retain and compensate for the services of a Tribal monitor/consultant who is both approvedby the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. This list is provided by the NAHC. The monitor/consultant would only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, without limitation, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant would complete daily monitoring logs that would provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring would end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant state in writing that the site has a low potential for impacting Tribal Cultural Resources.

CUL-2: **Unanticipated Discovery of Tribal Cultural and Archaeological Resources:** Upon discovery of any archaeological resources, all construction activities in the immediate vicinity of the find must cease until the find can be assessed. All archaeological resources unearthed by project construction activities would be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation would coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe would request reburial or preservation for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources would with CEQA Guidelines Section 15064.5(f) for historical resources and archaeological resources.

CUL-3: **Public Resources Code Sections 21083.2(b) for unique archaeological resources.** Preservation in place (i.e., avoidance) is the preferred manner of treatment upon discovering unique archaeological resources. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin must be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they would be offered to a local school or historical society in the area for educational purposes.

CUL-4: **Resource Assessment & Continuation of Work Protocol:** Upon discovery, the tribal and/or archaeological monitor/consultant/consultant would immediately divert work at minimum of 150 feet and place an exclusion zone around the burial. The monitor/consultant(s) would then notify the Tribe, the qualified lead archaeologist, and the construction manager who would call the coroner. Work would continue to be diverted while the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner would notify the NAHC as mandated by state law who would then appoint a Most Likely Descendent (MLD).

CUL-5: **Unanticipated Discovery of Human Remains and Associated Funerary Objects:** Native American human remains are defined in Public Resources Code ("PRC") Section 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC Section 5097.98, are also to be treated according to this statute. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material must be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she must contact by telephone within 24 hours, the Native American Heritage Commission (NAHC) and also comply with PRC Section 5097.98.

CUL-6: **Kizh-Gabrieleno Procedures for burials and funerary remains:** If the Gabrieleno Band of Mission Indians-Kizh Nation is designated MLD, the following treatment measures would be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, without limitation, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

CUL-7: **Treatment Measures:** Before ground disturbing activities continues, the land owner must arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains would be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe would make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials would be removed. The Tribe would work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation would be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation must be approved by the Tribe for data recovery purposes. Cremations would either be removed in bulk or by means as necessary to ensure complete recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan would be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive

diagnostics on human remains. Each occurrence of human remains and associated funerary objects would be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony would be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation must be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There cannot be publicity regarding any cultural materials recovered.

CUL-8: **Professional Standards:** Archaeological and Native American monitoring and excavation during construction projects would be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects must be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist must ensure that all other personnel are appropriately trained and qualified.

4.6 – Energy

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 *Greenhouse Gas and Energy Analysis* was prepared for the proposed project by MIG, dated April 14, 2023 (see Appendix C). The report estimates the potential energy usage and greenhouse gas emissions for the proposed project and evaluates project emissions against applicable South Coast Air Quality Management District (SCAQMD)-recommended California Environmental Quality Act (CEQA) significance thresholds for construction and operation.

a) Less Than Significant Impact. The proposed project consists of the demolition of 16 existing residential units (15 habitable units) and the construction of a 64-unit condominium project. Construction activities associated with the proposed project would require the use of heavy-duty, off-road equipment and construction-related vehicle trips that would combust fuel, primarily diesel and gasoline. Heavy-duty construction equipment would be required to comply with CARB's airborne toxic control measures, which restrict heavy-duty diesel vehicle idling to five minutes. It is estimated that construction activities would consume approximately 29,879 gallons of diesel fuel to power on-site, off-road heavy-duty construction equipment. Worker, vendor, and haul truck trips during construction activities are anticipated to consume 19,512 gallons of gasoline, 11,103 gallons of diesel, and 4,881 kWh of electricity.

Once operational, the proposed project would consume energy for vehicle trips, electricity and natural gas usage, and water and wastewater conveyance. As estimated using CalEEMod, the proposed buildings would consume approximately 616 megawatt-hours (mWh) of electricity per year. Operational vehicle trips are anticipated to consume approximately 124,194 gallons of gasoline, 20,374 gallons of diesel, and 63,457 kilowatt-hours (kWh) of electricity on an annual basis, upon its first year of operation. Electricity, natural gas, and gasoline fuel consumption are energy sources necessary to operate and maintain the proposed project in a safe manner. Lighting is essential for safety and security and natural gas consumption is needed for heating and other temperature-controlled activities. Due to energy efficiency standards being improved over time, the new structures would be more efficient in its energy consumption than the existing structures. In addition, the proposed project includes elements that support modes of transportation that would result in less gasoline consumption than transportation by single-occupancy gasoline-powered cars- the proposed project has five parking spaces dedicated for electric vehicles. As previously discussed, the proposed project would be built to the latest CALGreen Code and would be more energy efficient than the existing structures at the site and would not conflict with or obstruct a state or local plan for renewable energy. For these reasons, the proposed project

would not result in the wasteful, inefficient, or unnecessary use of energy resources. This impact would be less than significant.

b) Less Than Significant Impact. In addition, the proposed project would not conflict with or obstruct a state or local plan adopted for the purposes of increasing the amount of renewable energy or energy efficiency because no such plan is in place in the project area. This impact would be less than significant.

4.7 – Geology and Soils

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 as a result 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 (1997), creating substantial direct or indirect risks to life or property?	☐	☐	☑	☐

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 waste water?	☐	☐	☐	☑
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐

A *Report of Geotechnical Engineering Investigation* was prepared by Ryan Jones, GE, of Environmental Geotechnology Laboratory, Inc., dated May 19, 2023 (see Appendix D). The information in this section is largely taken from the *Report of Geotechnical Engineering Investigation*.

a.i) Less Than Significant Impact. No active faults have been identified at the ground surface within the City of Monterey Park as identified in the General Plan Safety Element, nor have any Alquist-Priolo Earthquake Fault zones been designated.[11, 12] The City overlies a number of blind thrust faults; however, the project site is not on or near any known blind thrust faults. Impacts would be less than significant.

a.ii) Less Than Significant Impact. Potential impacts from strong seismic ground shaking include injury or loss of life and property damage. The City lies within a geological region referred to as the Los Angeles Basin. The underlying geologic formations consist largely of ancient marine and river deposits which characteristics of sandy and clay like soils. The proposed project lies to the northeast of the City on relatively flat terrain. The project site is subject to strong seismic ground shaking, as are virtually all properties in Southern California. The 2022 California Building Code (California Building Code, California Code of Regulations, Title 24, Volume 2, as adopted by MPMC Chapter 16.05) contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake. The proposed condominiums would be subject to the seismic design criteria of the 2022 CBC. Adherence to these requirements would reduce the potential of the building from collapsing during an earthquake, thereby minimizing injury and loss of life. Although structures may be damaged during earthquakes, adherence to seismic design requirements would minimize damage to property within the structure because the structure is designed not to collapse. The CBC is intended to provide minimum requirements to prevent major structural failure and loss of life. Adherence to existing regulations would reduce the risk of loss, injury, and death. Therefore, impacts due to strong ground shaking would be less than significant.

a.iii) Less Than Significant Impact. Liquefaction is a phenomenon that occurs when soil undergoes transformation from a solid state to a liquefied condition due to the effects of increased pore-water pressure. This typically occurs where susceptible soils (particularly the medium sand to silt range) are located over a high groundwater table. Affected soils lose all strength during liquefaction and foundation failure can occur. According to the Seismic Hazard Evaluation of the Los Angeles 7.5- quadrangle, the project site is not located in a Zone of Required Investigation for liquefaction.[13] This indicates that the area has not been subject to historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions do not indicate a potential for permanent ground displacement such that mitigation as defined in Public Resources Code Section 2693(c) would be required. The site exhibits a very low seismic settlement potential and liquefaction would not be significant to the proposed development. Therefore, impacts due to seismically induced liquefaction would be less than significant.

a.iv) Less Than Significant Impact. According to the Seismic Hazard Evaluation of the Los Angeles 7.5-minute quadrangle, the project site is located in a suburbanized area that is relatively flat and there is no potential for landslides on the project site.[14] Impacts to the proposed project site would be less than significant.

b) Less Than Significant Impact. Topsoil is used to cover surface areas for the establishment and maintenance of vegetation due to its high concentrations of organic matter and microorganisms. Little native topsoil is likely to occur on the southern portion of the site because the topsoil would have been removed or compacted as a result of engineering for the existing on-site development. In addition, the northeastern portion of the site shows signs of previous disturbance. The project has the potential to expose surficial soils to wind and water erosion during construction activities. Wind erosion would be minimized through soil stabilization measures required by South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust), such as daily watering. Water erosion would be prevented through the City's standard erosion control practices required pursuant to the California Building Code and the National Pollution Discharge Elimination System (NPDES), such as silt fencing or sandbags. Following project construction, the site would be covered completely by paving, structures, and landscaping. Therefore, impacts related to soil erosion would be less than significant with implementation of existing regulations.

c) Less Than Significant Impact. Impacts related to liquefaction and landslides are discussed in Sections 4.7.a and 4.7.b. above and were determined to be less than significant. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Such movement can occur on slope gradients of as little as one degree. Lateral spreading typically damages pipelines, utilities, bridges, and structures. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (e.g., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. Due to the absence of any channel within or near the project site, and the subsurface soil conditions that are not conducive to liquefaction, the potential for lateral spread occurring on the project site is considered to be negligible. The project is required to be constructed in accordance with the requirements of the 2022 CBSC. The CBSC includes a requirement that any City-approved recommendations contained in the soils report be made conditions of the building permit. Compliance with existing CBSC regulations would limit hazard impacts arising from unstable soils to less than significant levels.

d) Less than Significant Impact. The 2022 CBSC requires special design considerations for foundations of structures built on soils with expansion indices greater than 20. According to the project soils report, near surface soils have medium expansion potential. The project would comply with all recommendations provided in the project *Report of Geotechnical Engineering Investigation* upon application for grading and building permits. Less than significant impacts would occur.

e) No Impact. The project proposes to connect to the existing municipal wastewater system via an eight-inch mainline that would connect to the existing wastewater mainline under South Alhambra Avenue. The project would connect to this system and would not require use of septic tanks; therefore, no impact would occur.

f) Less than Significant with Mitigation Incorporated. Given the urbanized nature of the project site and vicinity, previously recorded paleontological resources are not anticipated to be uncovered during project construction activities. However, in the event that previously undiscovered paleontological resources are discovered during ground-disturbing activities, **Mitigation Measures GEO-1** through **GEO-4** have been incorporated to ensure that paleontological resources are properly treated. With

implementation of **Mitigation Measures GEO-1** through **GEO-4**, impacts to paleontological resources would be less than significant.

Mitigation Measures

GEO-1: **Conduct Paleontological Sensitivity Training for Construction Personnel.** The Applicant must retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to conduct a Paleontological Sensitivity Training for construction personnel before commencement of excavation activities. The training would include a handout and would focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and the general steps a qualified professional paleontologist would follow in conducting a salvage investigation if one is necessary.

GEO-2: **Conduct Periodic Paleontological Spot Checks During Grading and Earth-Moving Activities.** The Applicant must retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to conduct periodic Paleontological Spot Checks beginning at depths below six feet from the surface to determine if construction excavations extend into older Quaternary deposits. After the initial Paleontological Spot Check, further periodic checks would be conducted at the discretion of the qualified paleontologist. If the qualified paleontologist determines that construction excavations have extended into the older Quaternary deposits, construction monitoring for Paleontological Resources are required. The Applicant must retain a qualified paleontological monitor, who would work under the guidance and direction of a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology. The paleontological monitor must be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into the older Pleistocene alluvial deposits. Multiple earth-moving construction activities may require multiple paleontological monitors. The frequency of monitoring is based on the rate of excavation and grading activities, proximity to known paleontological resources and/or unique geological features, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of paleontological resources and/or unique geological features encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the qualified professional paleontologist.

GEO-3: **Cease Ground-Disturbing Activities and Implement Treatment Plan if Paleontological Resources Are Encountered.** If paleontological resources and or unique geological features are unearthed during ground-disturbing activities, ground-disturbing activities the paleontological monitor may halt or divert away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet must be established around the find where construction activities are not allowed to continue until appropriate paleontological treatment plan is approved by the Applicant and the City. Work is allowed to continue outside of the buffer area. The Applicant and City would coordinate with a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource along with subsequent laboratory processing and analysis or preservation in place. At the paleontologist's discretion and to reduce construction delay, the grading and excavation contractor would assist in removing rock samples for initial processing.

GEO-4: **Prepare Report Upon Completion of Monitoring Services.** Upon completion of the above activities, the professional paleontologist would prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report would be submitted to the Applicant, the City, the Natural History Museums of Los Angeles County, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

4.8 – Greenhouse Gas Emissions

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	☐	☐	☑	☐

A *Greenhouse Gas and Energy Analysis* was prepared for the proposed project by MIG, dated April 14, 2023 (see Appendix C). The report estimates the potential energy usage and greenhouse gas emissions for the proposed project and evaluates project emissions against applicable South Coast Air Quality Management District (SCAQMD)-recommended California Environmental Quality Act (CEQA) significance thresholds for construction and operation.

a) Less than Significant Impact. Gases that trap heat in the atmosphere and affect regulation of the Earth's temperature are known as GHGs. GHG that contribute to climate change are a different type of pollutant than criteria or hazardous air pollutants because climate change is global in scale, both in terms of causes and effects.[15] Some GHG are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide), and off-gassing from low oxygen environments such as swamps or exposed permafrost (methane); however, GHG emissions from human activities such as fuel combustion (e.g., carbon dioxide) and refrigerants use (e.g., hydrofluorocarbons) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change. The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific GHGs – carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride – and two groups of gases – hydrofluorocarbons and perfluorocarbons. These GHG are the primary GHG emitted into the atmosphere by human activities. The six most common GHG's are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride, hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

GHG emissions from human activities contribute to overall GHG concentrations in the atmosphere and the corresponding effects of global climate change (e.g., rising temperatures, increased severe weather events such as drought and flooding). GHGs can remain in the atmosphere long after they are emitted. The potential for a GHG to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO_2, which has a GWP of one. By comparison, CH_4 has a GWP of 25, which means that one molecule of CH_4 has 25 times the effect on global warming as one molecule of CO_2. Multiplying the estimated emissions for non-CO_2 GHGs by their GWP determines their carbon dioxide equivalent (CO_2e), which enables a project's combined global warming potential to be expressed in terms of mass CO_2 emissions (referred to as CO_2 equivalents, or CO_2e).

The proposed project is located within the South Coast Air Basin, under the jurisdiction of the SCAQMD. In order to provide guidance to local lead agencies on determining the significance of GHG emissions in their CEQA documents, the SCAQMD convened the first GHG Significance Threshold Working Group (Working Group) meeting on April 30, 2008. To date, the Working Group has convened a total of 15 times, with the last meeting taking place on September 28, 2010. Based on the last Working Group meeting, the SCAQMD identified an interim, tiered approach for evaluating GHG emissions intent on capturing 90 percent of development projects where the SCAQMD is not the lead agency. The following describes the basic structure of the SCAQMD's tiered, interim GHG significance thresholds:

- Tier 1 consists of evaluating whether or not the project qualifies for applicable CEQA exemptions.
- Tier 2 consists of determining whether or not a project is consistent with a greenhouse gas reduction plan. If a project is consistent with a greenhouse gas reduction plan, it would not have a significant impact.
- Tier 3 consists of using screening values at the discretion of the Lead Agency; however, the Lead Agency should be consistent for all projects within its jurisdiction. The following thresholds were proposed for consideration:
    - 3,000 $MTCO_2e$ per year for all land use types; or
    - 3,500 $MTCO_2e$ per year for residential; 1,400 $MTCO_2e$ per year for commercial; 3,000 $MTCO_2e$ per year for mixed use projects.
- Tier 4 has three options for projects that exceed the screening values identified in Tier 3:
    - Option 1: Reduce emissions from business-as-usual by a certain percentage (currently undefined); or
    - Option 2: Early implementation of applicable AB 32 Scoping Measures; or
    - Option 3: For plan-level analyses, analyze a project's emissions against an efficiency value of 6.6 $MTCO_2e$/year/service population by 2020 and 4.1 $MTCO_2e$/year/service population by 2035. For project-level analyses, analyze a project's emissions against an efficiency value of 4.8 and 3.0 $MTCO_2e$/year/service population for the 2020 and 2035 calendar years, respectively.

This analysis uses the SCAQMD's interim Tier 3 GHG threshold to evaluate the proposed project's GHG emissions levels. The proposed project would generate GHG emissions from both short-term construction and long-term operational activities. Construction activities would generate GHG emissions primarily from equipment fuel combustion as well as worker, vendor, and haul trips to and from the project site during demolition, site preparation, grading, building construction, paving, and architectural coating activities. Construction activities would cease to emit GHG upon completion, unlike operational emissions that would be continuous year after year until the project is decommissioned. The SCAQMD recommends amortizing construction GHG emissions over a 30-year period and including them with operational emissions estimates. This normalizes construction emissions so that they can be grouped with operational emissions and compared to appropriate thresholds, plans, etc. Once operational, the proposed project would generate GHG emissions from area, stationary, mobile, water/wastewater, and solid waste sources. The proposed project's potential GHG emissions were estimated using CalEEMod, V.2022.1.1.6. Project emissions were generated using CalEEMod default assumptions and modified as necessary to reflect the following project-specific context, information, and details:

- The type and length of construction phases for each site, as well as the equipment used in each phase and the number of worker trips per day, were modified per information provided by the project proponent; and
- 9,000 cubic yards of soil was added as off-haul during the grading phase.

- The default, weekday trip generation rate and average vehicle miles travelled (VMT) distance was updated to reflect the trip generation rate provided in the Transportation Study Screening Analysis (Ganddini Group 2023).
- Natural gas use was excluded from the project since the project does not propose natural gas connections for building or appliance systems.

The proposed project's total unmitigated GHG emissions are shown in Table 7 (Project Greenhouse Gas Emissions), below.

Table 7
Unmitigated Project Greenhouse Gas Emissions

GHG Emissions Source	GHG Emissions ($MTCO_2e$ Per Year)
Operations	
Area	16
Energy	149
Mobile	1,049
Refrigerants	0.1
Waste	15
Water	7.5
Subtotal(A)	1,237
Construction	
Total Construction Emissions	601.9
Average Annual Emissions (30 Year Lifetime)(B)	20.1
Total Project Emissions(A)	**1,257**
SCAQMD Tier 3 Screening Threshold	**3,000**
SCAQMD Tier 3 Threshold Exceeded?	***No***
Project-specific 2030 GHG Emissions Goal	**1,800**
Project-specific GHG Emissions Goal Exceeded?	***No***

Source: MIG 2023 (see Appendix C) and SCAQMD, 2010.
(A) Totals may not equal due to rounding.
(B) Construction emissions value has been averaged over a 30-year assumed project lifetime.

As shown in Table 7, the proposed project's potential increase in GHG emissions would be below the SCAQMD's recommended GHG emissions thresholds. Furthermore, the proposed project's GHG emissions would also be below an adjusted project-specific GHG emissions goal of 1,800 $MTCO_2e$ per year, which takes into account post 2020 GHG emissions targets the state is currently working towards. The 1,800 $MTCO_2e$ per year goal was developed by taking the SCAQMD's Tier 3 threshold of 3,000 $MTCO_2e$ per year, which was the threshold to reduce emissions back to 1990 levels and reducing it by 40 percent (3,000 MTCO2e/yr. * (1 - 0.6) = 1,800 $MTCO_2e$/yr.). This reduction is consistent with the GHG reductions required by year 2025 to meet GHG reductions required under Senate Bill 32 (to reduce GHG emissions to levels 40% below 1990 levels by 2030). This linear reduction approach oversimplifies the threshold development process. The City of Monterey Park is not adopting nor proposing to use 1,800 $MTCO_2e$ as a CEQA GHG threshold for general use; rather, it is only intended to provide additional context and information on the magnitude of the proposed project's GHG emissions. The proposed project, therefore, would not generate GHG emissions that exceed SCAQMD CEQA thresholds. Impacts would be less than significant.

b) No Impact. The proposed project would not conflict with or otherwise obstruct implementation of a plan, policy, or regulation adopted for the purposes of reducing GHG emissions, including the California Air Resources Board (CARB) 2022 Climate Change Scoping Plan (2022 Scoping Plan), the Southern California Association of Governments (SCAG) 2020 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS), or the City of Monterey Park Climate Action Plan (CAP). Appendix D to CARB's 2022 Scoping Plan Update identifies potential actions that could be undertaken at a local level to support the State's climate goals. In addition to providing guidance to local lead agencies on long-term climate planning (e.g., developing a qualified climate action plan), this appendix also provides a list of key GHG reducing attributes for residential and mixed-use developments; projects that exhibit these attributes represent growth that is consistent with State's GHG reduction goals. Table 8 (Project Consistency with Key GHG Reducing Attributes (2022 Scoping Plan)), evaluates project consistency with these attributes.

Table 8
Project Consistency with Key GHG Reducing Attributes (2022 Scoping Plan)

Priority Area	Key Project Attribute	Project Consistency
Transportation Electrification	Provides electric vehicle (EV) charging infrastructure that, at a minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code (CALGreen Code) at the time of project approval.	*Consistent*. The proposed project would install EV charging infrastructure consistent with Tier II Voluntary Standards specified in the 2022 CALGreen Code.
VMT Reduction	Is located on infill sites that that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).	*Consistent*. The proposed project is located in a residential portion of the city. The project would intensify uses at the site by replacing approximately 15 habitable dwelling units with 64 new dwelling units. The proposed development would continue to be served by existing utilities and essential public services.
	Does not result in the loss or conversion of natural and working lands.	*Consistent.* The proposed project would consist of developing the site; it would not result in the loss or conversion of natural or working lands.
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or Is in proximity to existing transit stops (within a half mile), or	*Consistent*. The proposed project would result in a development intensity of approximately 37.6 dwelling units per acre, which meets the criteria.

	Satisfies more detailed and stringent criteria specified in the region's SCS.	
	Reduces parking requirements by: • Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet), or • Providing residential parking supply at a ratio of less than one parking space per dwelling unit, or • For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	*Consistent*. In accordance with the Density Bonus Law AB 2334, the proposed project would incorporate an affordable housing density bonus of 50% increase in housing density provided 15% of housing would be for very low income. The parking ratio associated with this bill would also be applied to the project: one parking space for zero to one bedroom, and one and a half parking spaces for two to three bedrooms. The proposed project, which includes the density bonus, would result in approximately 65% fewer parking spaces compared to those of the zoning requirements for the approximately 1.73-acre site.
	At least 20 percent of units included are affordable to lower-income residents.	*Inconsistent*. As identified above, 15% of the dwelling units proposed by the project would be for very low income per AB 2334, which is less than the 20% identified as a key project attribute.
	Results in no net loss of existing affordable units.	*Consistent*. The proposed project would not result in the net loss of existing affordable units.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propone or other fossil fuels for space heating, water heating, or indoor cooking.	*Consistent*. The proposed project would be an all-electric design. The project would not include natural gas plumbing nor use fossil fuels for space heating, water heating, or indoor cooking.
Source: CARB 2022, Appendix D Table 3. see Appendix C; and TAG 2023		

As shown in Table 8, the proposed project would be consistent with all of the Key GHG Reducing Attributes identified in the *2022 Scoping Plan*, except for providing 20% of dwelling units to low-income individuals. This inconsistency does not imply that the project would result in a potentially significant impact, because consistency with the project attributes is simply a qualitative means by which to assess whether or not a project would *clearly* be consistent with the State's climate goals (CARB 2022, pg. 23). In fact, Appendix D to the *2022 Scoping Plan* provides that, "Lead agencies may determine, with

adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals" (CARB 2022, pgs. 23 and 24). The proposed project would provide EV charging infrastructure based on the most stringent standards in the CALGreen Code, transit-supportive densities (i.e., greater than 20 dwelling units per acre), have approximately 65% fewer parking spaces than those allowed for by the City zoning code, result in a net increase in affordable housing at the site, and would not install, nor use, natural gas or fossil fuels for space heating, water heating, or indoor cooking. Therefore, based on these qualitative criteria, the growth proposed by the project would be consistent with the State's long-term GHG emission reduction goals.

The proposed project would also be consistent with the SCAG *2020 RTP/SCS*. The proposed project would add 64 new residential units and demolish 16 existing residential units (15 habitable units), which is consistent with the regional forecasts in the *2020 RTP/SCS*, in which Monterey Park is projected to add 4,100 residents, 2,200 households, and 2,500 jobs between 2016 and 2045 (SCAG 2020). The proposed project would incorporate an affordable housing density bonus of 50% increase in housing density provided 15% of housing would be for very low income (consistent with the requirements of AB 2334), and result in approximately 65% fewer parking spaces compared to those of the zoning requirements for the approximately 1.73-acre site. In addition, the project does not conflict with the *2020 RTP/SCS*'s goal of reducing vehicle miles travelled (VMT), as it met the City's VMT screening criteria and is presumed to have a less than significant VMT impact (see Appendix H). The project also aligns with the *2020 RTP/SCS*'s land use and transportation strategy of locating housing near transit by proposing a bus stop along South Alhambra Avenue bordering the proposed housing facility.

The City of Monterey Park has implemented a CAP to address GHG emissions related to land use patterns, transportations, building design, energy use, water demand, and waste generation. It outlines a roadmap to reduce GHG emissions and promote economic growth based on clean technology and sustainable practices. The CAP evaluates current GHG emissions; forecasts "business-as-usual" emissions; establishes a policy to reduce the City's GHG emissions to 15% below baseline 2009 levels by 2020; sets an aspirational goal of achieving GHG emissions 49% below baseline 2009 levels by 2035; and develops reduction strategies for building energy, transportation, land use, consumption, and solid waste emissions sources. These GHG reduction targets are consistent with the State's 2022 Climate Change Scoping Plan, which aims to reduce GHG emissions 40% below 1990 levels by 2030. The proposed project would be consistent with CAP growth projections, be subject to the latest State energy efficiency standards (consistent with CAP Policy E2), include higher density development near transit (consistent with CAP Policy LU1), provide water efficient landscaping (consistent with CAP Policy W1), and provide solid waste reduction services that divert waste from landfills (consistent with CAP Policy W2).

As described above, the proposed project would not result in significant GHG emissions, proposes growth in a manner that would be consistent with the State's long-term GHG emission reduction goals, and would not conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions. Impacts would be less than significant.

4.9 – Hazards and Hazardous Materials

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	☐	☐	☑	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile 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 two 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 *Limited Phase I Environmental Site Assessment* (ESA) was performed by Cal Land Engineering, dated August 17, 2016 (see Appendix F). The information in this section is largely taken from the *Limited Phase I ESA*.

a) Less than Significant Impact. The project could result in a significant hazard to the public if it includes the routine transport, use, or disposal of hazardous materials or places housing near a facility, which routinely transports, uses, or disposes of hazardous materials. The project is located within an area dominated by residential uses and surface streets. The project would not place housing near any hazardous materials facilities. The routine use, transport, or disposal of hazardous materials is primarily associated with industrial uses, which require such materials for manufacturing operations or produce hazardous wastes as by-products of production applications. The project, which is a residential use, does not propose or facilitate any activity involving significant use, routine transport, or disposal of hazardous substances.

Construction of the project would require the use and transport of hazardous materials such as asphalt, paints, and other solvents. Construction activities could also produce hazardous wastes associated with the use of such products. Construction would require ordinary construction activities and would not require a substantial or uncommonly high amount of hazardous materials to complete. All hazardous materials are required to be utilized and transported in accordance with their labeling pursuant to federal and state law. Routine construction practices include good housekeeping measures to prevent/contain/clean-up spills and contamination from fuels, solvents, concrete wastes, and other waste materials. Impacts related to construction would be less than significant.

With regard to project operation, widely used hazardous materials common at residential uses include paints and other solvents, cleaners, and pesticides. Operation of the proposed project would also involve the use of cleaning solutions for daily operation and paints for routine maintenance and re-coating of structures. The remnants of these and other products are disposed of as household hazardous waste (HHW) that includes used dead batteries, electronic wastes, and other wastes that are prohibited or discouraged from being disposed of at local landfills. Through compliance with existing regulations, use of common household hazardous materials and their disposal does not present a substantial health risk to the community. Therefore, impacts associated with the routine transport, use, or disposal of hazardous materials or wastes would be less than significant.

b) Less than significant Impact. The proposed project is a residential development within an existing residential area of the City of Monterey Park. The proposed project would have limited use of hazardous materials, as HHW would be used on the project site as part of the operations of the proposed residential use. The Phase I Environmental Site Assessment (ESA) completed by Cal Land Engineering, Inc. found that no known hazards are present on the project site. The Phase I ESA found no aboveground or underground storage tanks on the project site. Therefore, the proposed project would not 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. A less than significant impact would occur.

c) No Impact. No schools are located within one-quarter mile of the project site. The nearest school to the project site is Monterey Vista Elementary School, which is approximately 0.39 miles to the southeast of the site. The project is a residential use and would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Therefore, no impact would occur.

d) No Impact. The project is not located on a site listed on the state *Cortese List*, a compilation of various sites throughout the state that have been compromised due to soil or groundwater contamination from past uses.[16]

Based upon review of the *Cortese List*, the project site is not:

- listed as a hazardous waste and substance site by the Department of Toxic Substances Control (DTSC),[17]
- listed as a leaking underground fuel tank (LUFT) site by the State Water Resources Control Board (SWRCB),[18]
- listed as a hazardous solid waste disposal site by the SWRCB,[19]
- currently subject to a Cease and Desist Order (CDO) or a Cleanup and Abatement Order (CAO) as issued by the SWRCB,[20] or
- developed with a hazardous waste facility subject to corrective action by the DTSC.[21]

No impact would occur in relation to hazardous materials sites.

e) No Impact. The proposed project is not located within two miles of any public or private airport.[22] The nearest public or private airport facility to the project is the San Gabriel Valley Airport located approximately 5 miles to the northeast of the site in the City of El Monte. No impact would occur with regard to safety hazards or excessive airport noise.

f) Less Than Significant Impact. The City of Monterey Park provides for an emergency response plan and emergency preplacement plan. The proposed project does not introduce any permanent lane closures or reconfiguration of existing streets. Therefore, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. As such, a less than significant impact would occur.

g) No Impact. The proposed project is located in a completely urbanized area. The project site is not located within a fire hazard zone, as identified on the latest Fire Hazard Severity Zone (FHSZ) maps prepared by the California Department of Forestry and Fire Protection (CALFIRE).[23] In addition, the project is located in a Local Responsibility Area (LRA) and would be served by the City of Monterey Park Fire Department, and further supported by the Los Angeles County Fire Department should wildfires occur. Therefore, the proposed project would not result in an increased fire threat to the community. The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, no impact would occur.

4.10 Hydrology and Water Quality

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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 seiche 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 *Preliminary Low Impact Development (LID) Plan* was prepared by Hank Jong, Principal, of EGL Associates, Inc., dated May 17, 2023 (see Appendix G). The information in this section is largely taken from the *Preliminary LID Plan*.

a) Less than Significant Impact. A project normally would have an impact on surface water quality if discharges associated with the project would create pollution, contamination, or nuisance as defined in Water Code Section 13050, or that cause regulatory standards to be violated as defined in the applicable National Pollutant Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for the receiving water body. A significant impact could occur if the proposed project would discharge water that does not meet the quality standards of the agencies that regulate surface water quality and water discharge into stormwater drainage systems. Significant impacts could also occur if the project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). These regulations include preparation of a Stormwater Pollution Prevention Plan (SWPPP) to reduce potential water quality impacts during construction activity (Monterey Park Municipal Code Section 6.30.050) and the implementation of post-construction best management practices (BMPs) such as detention basins, infiltration ponds, porous pavement, sand and organic filters, etc.

Construction Impacts

Three general sources of potential short-term, construction-related stormwater pollution associated with the project include: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth-moving activities which, when not controlled, may generate soil erosion via storm runoff or mechanical equipment. All new development projects equal to one acre or more are subject to Los Angeles County NPDES Permit No. CAS004001. The proposed project would disturb approximately 1.73 acres of land and therefore would be subject to NPDES permit requirements during construction activities. In addition, pursuant to Municipal Code Section 6.30.050, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared and submitted for the proposed project. All construction projects must apply Best Management Practices (BMPs) that include drainage controls such as detention ponds, dikes, filter berms, and down drains to prevent runoff, and utilizing plastic covering to prevent erosion. Compliance with City discharge requirements would ensure that construction of the project would not violate any water quality standards or discharge requirements, or otherwise substantially degrade water quality. Impacts would be less than significant with implementation of existing regulations.

Operational Impacts

The proposed project would not generate hazardous wastewater that would require any special waste discharge permits. All wastewater associated with the proposed interior plumbing systems of the proposed condominiums would be discharged into the local sewer system for treatment at the regional wastewater treatment plant.[24] Impacts associated with operation of the proposed project would be less than significant with implementation of existing regulations. According to the LID Plan, generally, the majority of the site drains to the northeast into neighboring lots, and the general area drains northeasterly into a storm drain system along Newmark Avenue. The Los Angeles Regional Water Quality Control Board has jurisdiction over this project site and the site is located in Los Angeles River watershed and is within the Rio Hondo sub-watershed. Construction of the proposed project would increase impervious areas on the project site from 41% to 83%. The approximately 1.73-acre site would be redeveloped with 64 condominiums and associated pavement, parking, and landscaping. Runoff from the developed site would result in increased potential water contamination from urban pollutants that are commonly found in surface parking lots, ornamental landscape planters and from atmospheric buildup on rooftops. The proposed project would drain into the existing storm drain system in South

Alhambra Avenue. A storm drain catch basin would be located on the western edge of the site. Storm water from the site would drain westerly into the storm drain system and outlet to Alhambra Wash which drains into Rio Hondo Reach 2 & 1, then into Los Angeles River Reach 2 and Reach 1, before draining into the Pacific Ocean. Rio Hondo Reach 2 and Reach 1 are not susceptible to Hydromodification or any sediment related issues per latest State 303d list. Therefore, the project is exempt from Hydromodification.

The LID Plan determined that post-development peak stormwater runoff discharge rates would be slightly higher than the existing rate for the site. This slight increase in flow rate is attributed to the proposed increase in impervious surfaces on the site that would occur as a result of the project. The proposed project includes a bio-infiltration system which would mitigate 150% of the first 85th percentile stormwater volume produced on the site and infiltrate flows into the ground within 72 hours. Additionally, the project would incorporate Best Management Practices (BMPs) to reduce predictable pollutants in runoff entering the storm drain systems that drain to the ocean. These BMPs include site design BMPs to preserve existing drainage patterns and time of concentration, structural and non-structural source control BMPs, and treatment BMPs such as the proposed bio-filtration system. With the proposed bio-infiltration system and BMPs, the proposed project, post-developed runoff flow rates would be less than the allowable rates provided by the County. Since the project would be able to maintain a runoff less than that of the Los Angeles County allowable flow rates, no adverse effects would occur to the downstream conveyance system. In addition, the proposed BMP's would satisfy the City's water quality requirements, which would reduce the post-developed flow rates further as well as significantly reduce the pollutants generated from the project. With compliance with existing regulations, impacts would be less than significant.

b) Less than Significant Impact. If the project removes an existing groundwater recharge area or substantially reduces runoff that results in groundwater recharge such that existing wells would no longer be able to operate, a potentially significant impact could occur. Project-related grading would only go a few feet below the surface and would not reach the depth of the groundwater table. No disturbance of groundwater is anticipated. The proposed building footprints and pavement areas would increase impervious surface coverage on the site, thereby reducing the total amount of potential infiltration onsite. However, infiltration of irrigation water through soil would ensure continued groundwater recharge in Monterey Park as impervious surfaces increase. The project site is not utilized for groundwater recharge and would consist of approximately 17% of landscaped areas or soft-bottom surfaces that would allow for infiltration. Because this site is not managed for groundwater supplies and would provide landscaped areas for continued infiltration, this change in infiltration would not have a significant effect on groundwater table level. Impacts related to development of the proposed project would be less than significant.

c.i) Less than Significant Impact. Potentially significant impacts to the existing drainage pattern of the site or area could occur if development of the project results in substantial on- or off-site erosion or siltation. The site drains into a storm drain system that drains into the Alhambra Wash, then to Rio Hondo that connects into the Los Angeles River Reach 2 and then Reach 1 and then to Pacific Ocean. Rio Hondo Reach 2 and Reach 1 are currently listed in the Clean water act 303 (d) list due to impairment of cyanide, copper, lead, pH, toxicity, trash, zinc, and Coliform Bacteria.

Construction of the proposed project would increase impervious areas on the project site from 51% to 83% as the site currently consists of mostly impervious surfaces. The approximately 1.73-acre site would be replaced with a 64-unit condominium and associated pavement, parking, and landscaping. Runoff from the developed site would result in increased potential water contamination from urban pollutants that are commonly found in surface parking lots, ornamental landscape planters and from atmospheric buildup on rooftops. The proposed project would drain the site into South Alhambra

Avenue where there is an existing storm drain system. A storm drain catch basin is located on the western edge of the site. Storm water from the site would drain westerly into the storm drain system and outlet to Alhambra Wash which drains into Rio Hondo Reach 2 & 1, then into Los Angeles River Reach 2 and Reach 1, before draining into the Pacific Ocean. Rio Hondo Reach 2 and Reach 1 are not susceptible to Hydromodification or any sediment related issues per latest State 303d list.

A proposed stormwater bio-infiltration system would be provided to remove sediments and hydrocarbons from water runoff before entering the storm drain system. The post-developed drainage pattern of the project site would generally maintain the existing drainage patterns, with runoff ultimately discharging to the Pacific Ocean. Therefore, the drainage pattern would not be substantially altered in a manner that could cause increases in erosion on- or off-site. Erosion and siltation reduction measures would be implemented during construction. At the completion of construction, the site would consist of impervious surfaces and would therefore not be prone to substantial erosion. No streams cross the project site; thus, the project would not alter any stream course. Impacts would be less than significant.

c.ii) Less than Significant Impact. As discussed in Section 4.10.c.i above, a river or stream does not lie within the proposed project site. Additionally, the project would not lead to a substantial alteration of existing drainage patterns in the area. Therefore, the impact is less than significant.

c.iii) Less than Significant Impact. Construction of the proposed project would increase the net area of impervious surfaces on the site; therefore, increased discharges to the City's existing storm drain system would likely occur. However, as discussed above, the proposed project would drain the site into South Alhambra Avenue where there is an existing storm drain system. A storm drain catch basin is located on the western edge of the site. Storm water from the site would drain westerly into the storm drain system and outlet to Alhambra Wash which drains into Rio Hondo Reach 2 & 1, then into Los Angeles River Reach 2 and Reach 1, before draining into the Pacific Ocean. Rio Hondo Reach 2 and Reach 1 are not susceptible to Hydromodification or any sediment related issues per latest State 303d list. A proposed stormwater bio-infiltration system would be provided to remove sediments and hydrocarbons from water runoff before entering the storm drains in South Alhambra Avenue. The post-developed drainage pattern of the project site would generally maintain the existing drainage patterns, with runoff ultimately discharging to the Pacific Ocean. Permits to connect to the existing storm drainage system would be obtained before construction. All drainage plans are subject to City review and approval. These requirements would apply to the proposed project. Therefore, the increase in discharges would not impact local storm drain capacity. The proposed residential use does not have the potential to generate polluted runoff and therefore would not result in substantial pollutant loading such that treatment control BMPs would be required to protect downstream water quality. Post-construction BMP's would also ensure the project would not result in substantial pollutant loading. Therefore, impacts related to the proposed project would be less than significant.

c.iv) No Impact. According to flood maps prepared by the Federal Emergency Management Agency, the project site is located in Zone X, which is an area determined to be outside the 100-year flood hazard area.[25] Therefore, the project is not located within a 100-year flood floodplain and would not impede or redirect flood flows. Impacts would be less than significant.

d) Less than Significant Impact. As discussed in Section 4.10.c.iv above, the project site is not located within a 100-year flood floodplain. No impact would occur. The project site is not subject to tsunami due to its elevation (over 390 feet) and distance from the ocean (over 20 miles).

There is one reservoir in the City of Monterey Park (Garvey Reservoir) owned by the Metropolitan Water District (MWD) that stores municipal water supplies for MWD customers. However, as shown in Figure SCS-6 (Flood Inundation Areas: Garvey Reservoir and Laguna Basin) of the Monterey Park General

Plan Safety Element, the project site is not located within the inundation area of the Garvey Reservoir; therefore, seiche from the reservoir would not occur at the project site.[26] As noted in Section 4.7.iv, the project site has not been identified in an area susceptible to landslides, thus the potential for mudflow is relatively low because the project does not lie in a landslide hazard zone and no natural rivers or streams are located in the project vicinity. The project is located approximately 9.2 miles from the Santa Fe Dam and 10.1 miles from the Puddingstone Reservoir. In the event of a dam failure, flood waters are not expected to reach the City of Monterey Park or the project site. The Los Angeles County Public Works Department operates and maintains a state-of-the-art ALERT computer system to monitor meteorological conditions in the County and Southern California in real time, i.e., as they occur. The system includes a network of field sensors that monitor and receive precipitation amounts including rainfall data from the Corps of Engineers' Los Angeles Telemetry System. These systems allow for system level real time checks that provide for emergency management planning. The City of Monterey Park likewise operates an Emergency Management system in the event of dam failures. The proposed project does not include modifications to a dam system or levees that would alter the hazard planning completed by the City of Monterey Park. With adherence to existing policies, regulations, and ordnances the proposed project would have a less than significant impact.

e) Less than Significant Impact. The Regional Board's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan (i) designates beneficial uses for surface and ground waters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and (iii) describes implementation programs to protect all waters in the region. Development of the project would be required to adhere to requirements of the water quality control plan, including all existing regulation and permitting requirements. This would include the incorporation of best management practices (BMPs) to protect water quality during construction and operational periods. Development of the project would also be subject to all existing water quality regulations and programs, including all applicable construction permits. Existing General Plan policies related to water quality would also be applicable to the project. Implementation of these policies, in conjunction with compliance with existing regulatory programs, would ensure that water quality impacts related to the project would be less than significant.

4.11 – Land Use and Planning

Would the project:

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

a) No Impact. The project site is currently developed with 14 multi-family dwelling units (one uninhabitable), a single-family home, and an ADU. The site is surrounded by residential uses on all sides. The site is currently designated High Density Residential in the City's General Plan and the City's Zoning Code for High Density Residential (R-3). The project would develop similar residential uses as currently exist on the site and in the surrounding area. The project does not involve construction of any roadway, flood control channel, or other structure that would physically divide any portion of the community. Therefore, no impact would occur.

b) Less than Significant Impact. The site is currently designated High Density Residential in the City's General Plan and the City's Zoning Code for High Density Residential (R-3). As discussed in Section 4.1 above, the allowed density for the R-3 designation is 25 dwelling units per acre. In addition, Monterey Park Municipal Code (MPMC) Section 21.08.080 provides that no building within a residential designation can exceed two stories or 30 feet in height. However, because the project would designate fifteen percent (15%) of the proposed units as very-low income housing, the project would qualify for an Affordable Housing density bonus of fifty percent (50%) (MPMC Section 21.18.160) and height incentives up to 3 stories or 41 feet in height (MPMC Section 21.18.050(D). With the Affordable Housing density bonus, the proposed project is allowed to develop up to 65 dwelling units. As previously described, the proposed project consists of 64 condominiums. Upon completion, the proposed development would be three stories and would have a maximum height of 38.7 feet at its highest point (as measure from the Grade Plane). Therefore, the proposed project would not conflict with the applicable zoning regulating the height of developments. In addition, the project would develop similar residential uses as currently exist on the site and in the surrounding area. Similar residential uses are located on all sides of the site and the project area is dominated by residential uses. The project would maintain the integrity of the residential neighborhood in terms of density, use, and design. The project does not include any feature that would circumvent any mitigating policies in the Monterey Park General Plan. Therefore, impacts would be less than significant.

4.12 – Mineral Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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) No Impact. The project site is in a completely urbanized area within the City of Monterey Park. According to the California Department of Conservation, Division of Mines and Geology Resources, no known mineral resources exist in the City of Monterey Park.[27] No loss of availability of a known mineral resource would occur. Therefore, no impact would occur.

b) No Impact. The project site is located in a completely urbanized area within the City of Monterey Park. There are no mineral extraction or process facilities on or near the site.[28] No mineral resources are known to exist within the vicinity of the project site. No known mineral resources have been identified by the Monterey Park General Plan EIR 2014 or in any other plan. Therefore, no impact would occur.

4.13 – Noise

Would the Project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent 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 groundborne vibration or groundborne 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 two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☑	☐

A *Noise and Vibration Analysis* was prepared for the proposed project by MIG, dated April 17, 2023 (see Appendix E). The information in this section is based on the *Noise and Vibration Analysis*.

Existing Noise Environment

The proposed project is located in eastern Monterey Park, in an area classified and designated as High Density Residential by the MPMC and by the Land Use and Urban Design Element of the City's General Plan. The City's General Plan identifies street and freeway traffic and aircraft overflights as the dominant noise sources in the City, with lawnmowers, children at play, and dogs barking specifically contributing to residential noise.

Existing ambient noise levels in the project area were measured in August 2018. Noise levels were measured with one Larson Davis Model LxT, Type 1, sound level meter. The meter's receiving microphone was set at a high of roughly five feet above ground level to approximate a human receptor. Noise monitoring was conducted in ten-minute intervals. Conditions during the monitoring were mostly sunny with temperatures ranging from high 90s to 100s, with calm winds (0-5 mph). One short-term measurement was conducted to provide typical ambient noise levels in the vicinity of the project area, provide direct observations of existing noise sources at and in the vicinity of the project area, and evaluate project noise levels at nearby sensitive receptors. The ambient noise monitoring location was within the project site on a private driveway in the western portion of the project site, approximately 50 feet from the centerline of South Alhambra Avenue.

Based on observations made during the ambient noise monitoring, the existing noise environment in the project vicinity consists primarily of vehicles on South Alhambra Avenue, overhead air traffic, and residential noises such as leaf blowers and pedestrians. Table 9 (Existing Ambient Noise Levels (dBA)), summarizes the results of the ambient noise monitoring.

Table 9
Existing Ambient Noise Levels (dBA)

Monitoring Time	Leq	Lmin	Lmax	L (50)
2:00 PM	59.2	36.9	81.4	51.2
3:00 PM	57.2	38.9	75.1	52.4
4:00 PM	58.0	39.3	78.7	51.4
5:00 PM	56.8	38.9	75.0	51.4
6:00 PM	55.6	40.0	70.0	50.3
2:00 pm – 7:00 pm; Monitoring Average	57.5	36.9	75.0	51.4
Source: MIG, 2023.				

Although ambient noise data was measured in 2018, the data is still considered representative of conditions in Spring 2023 because the proposed project is situated in a residential area, away from major transportation corridors, and has not experienced substantial changes in land uses. Thus, it is unlikely that substantial changes to ambient noise levels near the project site have occurred since 2018. The project site is not located within any airport planning boundaries. The nearest public or private airport facility to the project is the San Gabriel Valley Airport located approximately 5 miles to the northeast of the site in the City of El Monte.

Sensitive Receptors

Noise sensitive receptors are buildings or areas where unwanted sound or increases in sound may have an adverse effect on people or land uses. Residential areas, hospitals, schools, and parks are examples of noise receptors that could be sensitive to changes in existing environmental noise levels. The closest sensitive receptors are the residential areas located adjacent to and directly across from the project on all sides.

Regulatory Setting

City of Monterey Park General Plan

The MPMC and General Plan Safety Element establish the following standards applicable to construction noise, operational noise, and noise/land use compatibility:

- *Construction Noise*: MPMC Section 4.50.100 exempts construction activity from noise regulations between the hours of 7:00 AM and 7:00 PM on Monday through Friday, and the hours of 9:00 AM and 6:00 PM on Saturdays, Sundays, and holidays.

- *Operational Noise:* MPMC Section 4.50.080 establishes non-transportation noise source standards for noise-receiving land uses. These standards provide restrictions on the amount and duration of noise generated at a property, as measured at the property line of the noise receiver. The MPMC prohibits noise generation exceeding the measured ambient noise level or the Code's presumed ambient noise levels for different receiving land use types, whichever is greater. The allowable ambient noise level for a residential land use, as set by the MPMC, are as follows:

  - Daytime (7:00 AM – 10:00 PM): 55 dBA equivalent continuous sound level (L_{eq})
  - Nighttime (10:00 PM – 7:00 AM): 50 dBA L_{eq}

  MPMC Section 4.50.090 adjusts these standards for noise disturbances containing a steady, audible tone, such as a whine, screech, beating, pulsating, throbbing, or hum by reducing the noise level limit by five decibels. This requirement would not apply to the proposed project because it does not involve impulsive or steady-tone noise sources.

- *Noise/Land Use Compatibility*: The City's General Plan Safety Element establishes a noise land use compatibility maximum for residential uses of 65 Community Noise Equivalent Level (CNEL).

a) Less Than Significant with Mitigation Incorporated. The proposed project would generate noise during construction and operation of the proposed facilities. An analysis of these potential impacts is provided below.

Project Construction

The proposed project involves construction activities including demolition, site preparation, grading, building construction, paving and architectural coating in an existing residential area of the City. Construction activities are anticipated to begin July 2024 and may last approximately 19 months in total. In general, construction activities would involve the use of worker vehicles, delivery trucks, dump trucks, and heavy-duty construction equipment such as (but not limited to) backhoes, tractors, loaders, graders, excavators, rollers, cranes, material lifts, generators, and air compressors. These types of construction activities would generate noise and vibration from the following sources:

- Heavy equipment operations at different work areas. Some heavy equipment would consist of mobile equipment such as a loader and excavator that would move around work areas; other equipment would consist of stationary equipment (e.g., cranes or material hoists/lifts) that would generally operate in a fixed location until work activities are complete. Heavy equipment generates noise from engine operation, mechanical systems, and components (e.g., fans, gears, propulsion of wheels or tracks), and other sources such as back-up alarms. Mobile equipment generally operates at different loads, or power outputs, and produces higher or lower noise levels depending on the operating load. Stationary equipment generally operates at a steady power output that produces a constant noise level.

- Vehicle trips, including worker, vendor, and haul truck trips. These trips would occur on South Alhambra Avenue and other local roads used to access the site.

Typical construction equipment noise levels at different distances are shown in Table 10 (Potential Project Construction Equipment Noise Levels).

Table 10
Potential Project Construction Equipment Noise Levels

Typical Equipment	Noise Level at 50 feet (L_{max})[A]	Percent Usage Factor[B]	Predicted Equipment Noise Levels (L_{eq})[C]						
			25 Feet	50 Feet	75 Feet	100 Feet	150 Feet	200 Feet	250 Feet
Bulldozer	85	40	87	81	77	75	71	69	67
Backhoe	80	40	82	76	72	70	66	64	62
Compact Roller	80	20	79	73	69	67	63	61	59
Concrete mixer	85	40	87	81	77	75	71	69	67
Crane	85	16	83	77	74	71	67	65	63
Excavator	85	40	87	81	77	75	71	69	67
Generator	82	50	85	79	75	73	69	67	65
Pneumatic tools	85	50	88	82	78	76	72	70	68
Scraper	85	40	87	81	77	75	71	69	67
Delivery Truck	85	40	86	81	77	75	71	69	67

Sources: Caltrans, 2013 and FHWA, 2010.
(A) L_{max} noise levels based on manufacturer's specifications.
(B) Usage factor refers to the amount (percent) of time the equipment produces noise over the time period
(C) Estimate does not account for any atmospheric or ground attenuation factors. Calculated noise levels based on Caltrans, 2013: L_{eq} (hourly) = L_{max} at 50 feet – 20log (D/50) + 10log (UF), where: L_{max} = reference L_{max} from manufacturer or other source; D = distance of interest; UF = usage fraction or fraction of time period of interest equipment is in use.

With regard to construction noise, demolition, site preparation, and grading phases typically result in the highest temporary noise levels due to the use of heavy-duty equipment such as dozers, excavators, graders, loaders, scrapers, and trucks. Construction noise impacts generally occur when construction activities occur in areas immediately adjoining noise sensitive land uses, during noise sensitive times of the day, or when construction durations last over extended periods of time.

Construction activities associated with the proposed project would last approximately 19 months. Construction activities would occur in close proximity to adjacent residential properties. As shown in Table 10, worst case hourly L_{eq} and L_{max} construction equipment noise levels are predicted to be approximately 82 dBA L_{eq} and 85 dBA L_{max}, respectively, at 50 feet; however, the magnitude of the project's temporary and periodic increase in ambient noise levels would depend on the nature of the construction activity (i.e., demolition, building construction, grading) and the distance between the construction activity and sensitive receptors/outdoor use areas. Sensitive residential receptors could be within 25 feet of work areas for short periods of time (e.g., site grading along the property boundary), at which distance construction equipment may reach 88 dBA L_{eq}. Project construction in the middle of the site would be at least 100 feet from sensitive receptors to the north, east, and south. At this distance (100 feet), equipment could reach 76 dBA L_{eq}. The concurrent operation of a dozer, backhoe, and delivery truck at the same time and in the same general area could produce a combined noise level of approximately 80 dBA L_{eq} on a short-term basis (less than an hour) at 100 feet.

Although project construction may temporarily increase noise levels near the site, it is not anticipated to result in physical harm (e.g., temporary or permanent hearing loss or damage) to any sensitive noise receptor because receptors would not be continuously exposed to elevated construction noise levels (i.e., noise levels would return to ambient conditions when construction ceases for the day) and the construction noise levels presented above are exterior noise levels, whereas receptors would be likely to be inside buildings. Typical residential and commercial construction in California typically provides at least 12 dBA of exterior to interior noise attenuation with windows open and 20 dBA of exterior to interior

noise attenuation with windows closed.[i] Physiological effects occur when the human ear is subjected to prolonged exposure to high noise environments. For example, to protect workers from noise-induced hearing loss, the U.S. Occupational Safety and Health Administration (OSHA) limits worker noise exposure to 90 dBA as averaged over an 8-hour time period (29 CFR 1910.95). Similarly, the National Institute for Occupational Safety and Health (NIOSH) recommends workers limit noise exposure to no more than 85 dBA over an 8-hour period to protect against noise-induced hearing loss (NIOSH, 1998). As shown in Table 11, potential worst-case hourly noise level estimates for any single piece of equipment would be approximately 88 dBA L_{eq} at 25 feet and 76 dBA L_{eq} at 100 feet. Although hourly construction noise levels may approach 88 dBA L_{eq} for one or two hours, such noise levels would not be sustained over an 8-hour period (due to movement of equipment and changes in operations that occur during daily construction activities). Therefore, at worst-case, noise from construction activities may pose a temporary interference or annoyance effect on nearby sensitive receptors but would not result in adverse physiological effects on human receptors in the surrounding area.

MPMC Section 4.50.100 limits construction activities to the hours of 7 AM to 6 PM, Monday to Friday, and 9 AM to 6 PM on Saturday, Sunday, and holidays; however, neither the City's General Plan nor the MPMC establish a specific numeric noise standard (e.g., 90 dBA L_{eq}) for construction noise levels. As discussed above, the project's potential construction noise levels would range from approximately 76 dBA L_{eq} to 88 dBA L_{eq} depending on the specific equipment in use and the distance between the equipment and adjacent residential properties. These noise levels would be approximately 16 dB to 30 dB above the existing ambient noise levels measured at the project site (see Table 10). Although the City does not maintain a specific construction noise level standard, a temporary increase in noise levels of 16 dB to 30 dB would represent more than a quadrupling in loudness during peak noise generating activities. To reduce the potential for construction activities to result in a substantial temporary increase in ambient noise levels in the vicinity of the project site, and to reduce effects on adjacent residential receptors, **Mitigation Measure NOI-1** is incorporated into the project. Mitigation Measure NOI-1 would provide advanced notice of construction activities to surrounding residential properties, limit construction hours per MPMC requirements, limit noise from stationary and other construction equipment, and reduce temporary construction noise impacts by a minimum of 5 to 10 dBs. The proposed project would comply with the City's applicable construction noise control regulations and implement other mitigation measures to reduce the potential for project construction activities to result in a substantial temporary increase in ambient noise levels. With **Mitigation Measure NOI-1**, temporary construction noise levels would be rendered a less-than-significant impact.

Long-term Operational Noise Levels

On-site Noise Sources

The project site and surrounding properties to the north, east, and south are all designated High Density Residential (R-3) by the City's zoning regulations; properties to the west, across South Alhambra Avenue, are all designated as Medium Density Residential (R-2) by the City's zoning code. MPMC Section 4.50.080 establishes the maximum permissible noise level that may intrude into adjacent property lines. The code establishes maximum permissible noise levels for residential land uses of 55 dBA L_{eq} for daytime hours (7:00 AM to 10:00 PM) and 50 dBA L_{eq} for nighttime hours (10:00 PM – 7:00 AM). The existing daytime ambient noise levels at the project site ranged from 55.6 to 59.2 dBA L_{eq}, which is above the City's permissible daytime noise levels (55 dBA L_{eq}). Nighttime (10 PM to 7 AM) noise levels are typically 5 to 10 dBA less due to reduced traffic volumes on adjacent roadways and

[i] The U.S. Department of Housing and Urban Development (HUD) Noise Guidebook and supplement (2009a, 2009b) includes information on noise attenuation provided by building materials and different construction techniques. As a reference, a standard exterior wall consisting of 5/8-inch siding, wall sheathing, fiberglass insulation, two by four wall studs on 16-inch centers, and 1/2-inch gypsum wall board with single strength windows provides approximately 35 dBs of attenuation between exterior and interior noise levels, provided windows do not occupy more than 30% of the exterior wall space.

less exterior neighborhood activity (e.g., less lawn maintenance, outdoor recreation) and thus are assumed to be below the City's permissible nighttime noise level (50 dBA L_{eq}).

The existing residential land uses at and near the site generate noise from vehicle parking activities, waste collection activities, landscaping activities, stationary heating, ventilation, and air conditioning (HVAC) equipment, and other residential activities (e.g., building maintenance). The proposed project would involve similar noise generating sources and activities as the existing land uses; however, the amount of mechanical equipment and the intensity of parking would be greater than existing land uses at the site. Although the proposed project could increase the amount of noise sources and noise-generating activities compared to existing conditions, the project would have a limited potential to generate significant on-site noise levels. In general, residential land uses (including the proposed multi-family condominium land uses) are not a substantial noise-generating land use because they do not involve substantial noise-generating activities during the nighttime, mechanical equipment associated with elevators, residential amenities, and other building systems are typically enclosed within closets, sheds, and/or equipment rooms, and HVAC equipment is typically screened from public view by landscaping, fences, or walls and, therefore, shielded from adjacent property lines.

Once constructed, the proposed project's primary on-site noise generating activities will be parking, human activity, and HVAC equipment. The site design generally places most parking activities underground, with the housing units situated around the eastern, western, and southern perimeter of the site. This design shields parking and other interior site noise (e.g., use of the site's courtyard) from adjacent residential properties. Individual condominium balconies would face the perimeter of the site. Use of the balconies would result in human speech, laughter, and other sounds near property lines; however, in a quiet setting the average normal voice level is approximately 55 dBA and balcony use would not generate sustained noise levels above 50 dBA L_{eq} at any adjacent property line.

The project's small rooftop HVAC units would be rated to condition individual condominium spaces that would be approximately 650 to 2,100 square feet in size. Small, individual residential HVAC units can produce a noise level up to 75 dBA at a distance of 3 feet. Based on distance attenuation, uncontrolled HVAC noise levels would reach 50 dBA at a distance of 54 feet. The roof plans for the proposed project indicate HVAC equipment would be located closer than 54 feet from adjacent property lines; individual units would be set back at least 30 feet from the southern property line (55 dBA uncontrolled HVAC noise level), 40 feet from the western property line (52.5 dBA uncontrolled HVAC noise level), 50 feet from the eastern property line (50.6 dBA uncontrolled HVAC noise level), and 55 feet from the northern property line (49.7 dBA uncontrolled HVAC noise level). Although some HVAC units could be closer than 54 feet from adjacent property lines, the units would be located approximately 41 feet above grade and fully screened and concealed behind a four-foot-tall parapet that would direct the sound upwards, increasing the distance the soundwave must travel to receptor locations and attenuating HVAC noise levels by at least 5 dBA. In addition, HVAC equipment does not operate continuously and would not affect ambient noise levels when the equipment is not in use. For these reasons, potential HVAC equipment would not generate noise levels in excess of the City's 50 dBA L_{eq} nighttime noise standard at any shared residential property line, or otherwise result in a substantial permanent increase in ambient noise levels in the vicinity of the project.

For the reasons outlined above, the proposed project would not generate on-site noise levels that exceed City standards or otherwise result in a substantial permanent increase in ambient noise levels in the vicinity of the project. This impact would be less than significant.

Off-Site Vehicle Trip Noise

The *Transportation Study Screening Analysis* prepared for the proposed project identifies that the proposed project is estimated to result in a net increase of 331 daily vehicle trips (see Appendix H). In

general, it takes a doubling of traffic to increase traffic noise volumes by 3 dBA. Although the current average daily traffic volume on South Alhambra Avenue is not known, the area surrounding the project site is developed with residential land uses and traffic volumes on South Alhambra Avenue and other roadways used to access the project site are assumed to be at least 1,000 vehicle trips per day. The addition of 308 passenger cars to the roadway system would not result in a doubling of traffic on any roadway segment at or in the vicinity of the project site and, therefore, would result in a less than 3 dBA increase in noise levels on local roads used to access the project site. The proposed project, therefore, would not result in a substantial, permanent increase in noise levels along the roadways used to access the proposed project as compared to existing or future conditions. This impact would be less than significant.

Consistency with General Plan Policies

The City's General Plan Safety Element includes goals and policies that minimize the impact of construction and point noise sources throughout the City. For example, General Plan Safety and Community Services Element Policy 12.1 requires the City to continue to enforce its noise ordinance to control point source noise and Policy 12.2 requires the City to incorporate noise impact considerations into the development review process, ensuring City standards are addressed during project design and development. In addition, Policy 12.3 specifically requires new multi-family residential developments to incorporate design features to minimize intrusion of ambient noise into private and common outdoor spaces. Finally, Policy 12.4 requires the City to enforce any city ordinances regulating hours of construction activity. The proposed project would be consistent with these General Plan policies because it would not result in on- or off-site noise levels that exceed Municipal Code requirements for residential land uses and would comply with the MPMC's permissible construction work periods.

Other Planning Considerations

A Lead Agency is not required to analyze how existing conditions might impact a project's existing or future population except where specifically required by CEQA; however, a Lead Agency may elect to disclose information relevant to a project even if it not is considered an impact under CEQA. Furthermore, the City's General Plan sets noise standards for receiving land uses which require evaluation for consistency and compliance even if such evaluation is not required by CEQA to be identified as a physical impact of a project. The City's General Plan Safety Element establishes a noise and land use compatibility goal for residential uses of 65 CNEL. Noise monitoring conducted at the project site in 2018 (see Table 2) indicates daytime hourly ambient noise levels at the site ranged from approximately 55 to 59 dBA L_{eq}. These daytime noise levels are less than 60 dBA. Daily noise exposure at the project site is, therefore, considered to be within the City's noise and land use compatibility goal of 65 CNEL. In addition, interior noise exposure would be less than 45 CNEL with windows closed and use of the project's HVAC system. Therefore, the proposed project is considered compatible with the exterior ambient noise environment in the project area and no exterior or interior noise design features are required for the project.

Conclusion

As detailed above, the proposed project would not generate temporary or permanent noise levels that would exceed the City's standards or otherwise result in a substantial increase in ambient noise levels with the incorporation of mitigation measures. The proposed project, therefore, would not result in a substantial, adverse noise-related effect on the environment.

b) Less Than Significant Impact. Vibration is the movement of particles within a medium or object such as the ground or a building. Vibration sources are usually characterized as continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency; however, unlike airborne sound, there is no standard way of measuring and reporting amplitude. Vibration amplitudes can be expressed in terms of

velocity (inches per second) or discussed in dB units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are usually discussed in terms of peak particle velocity (PPV) in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for building damage. Vibration can impact people, structures, and sensitive equipment. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments, such as electron microscopes. Groundborne noise is noise generated by vibrating building surfaces such as floors, walls, and ceilings that radiate noise inside buildings subjected to an external source of vibration. The vibration level, the acoustic radiation of the vibrating element, and the acoustical absorption of the room are all factors that affect potential groundborne noise generation.

Caltrans' Transportation and Construction Vibration Guidance Manual provides a summary of vibration human responses and structural damage criteria that have been reported by researchers, organizations, and governmental agencies. These thresholds are summarized in Table 11 (Caltrans' Vibration Threshold Criteria for Building Damage) and Table 12 (Caltrans' Vibration Threshold Criteria for Human Response), below.

Table 11
Caltrans' Vibration Criteria for Building Damage

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.12 to 0.2
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50
Source: Caltrans, 2020		

Table 12
Vibration Criteria for Human Response

Human Response	Maximum PPV (in/sec)	
	Transient	Continuous
Slightly perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severe/Disturbing	2.0	0.7 (at 2 Hz) to 0.17 (at 20 Hz)
Very disturbing	--	3.6 (at 2 Hz) to 0.4 (at 20 Hz)
Source: Caltrans, 2020		

Construction activities have the potential to result in varying degrees of ground vibration, depending on the specific construction equipment used and activities involved. Vibration generated by construction equipment spreads through the ground and diminishes with increases in distance. The effects of ground vibration may be imperceptible at low levels, result in low rumbling sounds and detectable vibrations at moderate levels, and can disturb human activities such as sleep and vibration sensitive equipment at high levels. Ground vibration can also potentially damage the foundations and exteriors of existing structures even if it does not result in a negative human response. Pile drivers and other pieces of high impact construction equipment are generally the primary cause of construction-related vibration impacts. The use of such equipment is generally limited to sites where there are extensive layers of

very hard materials (e.g., compacted soils, bedrock) that must be loosened and/or penetrated to achieve grading and foundation design requirements. The need for such methods is usually determined through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with foundation design recommendations and the construction methods needed to safely permit development of a site. Pile driving equipment is not anticipated to be required at the proposed project site.

Construction vibration impacts generally occur when construction activities occur in close proximity to buildings and vibration-sensitive areas, during evening or nighttime hours, or when construction activities last extended periods of time. Although potential heavy equipment operations at the site for all demolition, site preparation, grading, and paving activities would not last more than approximately 45 days, construction activities would occur in close proximity to adjacent residential properties. The ground-borne vibration levels generated by the type of equipment that would be used to construct the proposed project are shown in Table 13 (Potential Project Construction Vibration Levels).

Table 13
Potential Project Construction Vibration Levels

Equipment	Peak Particle Velocity (in/sec) (A)			
	25 feet	50 feet	100 feet	200 feet
Small bulldozer	0.003	0.001	0.001	0.000
Jackhammer	0.035	0.016	0.008	0.004
Loaded truck	0.076	0.035	0.017	0.008
Large bulldozer	0.089	0.042	0.019	0.009
Vibratory Roller	0.21	0.098	0.046	0.021

Sources: Caltrans, 2020 and FTA, 2018

(A) Estimated PPV calculated as: PPV(D)=PPV(ref)*(25/D)^1.1 where PPV(D)= Estimated PPV at distance; PPVref= Reference PPV at 25 ft; D= Distance from equipment to receiver; and n= ground attenuation rate (1.1 for dense compacted hard soils).

As shown in Table 13, the vibration levels associated with typical construction equipment are dependent on the type of equipment used. For structural damage, the use of typical equipment during construction activities (e.g., bulldozer, jack hammer, trucks etc.) would produce PPV levels up to 0.098 in/sec at 50 feet. These PPV values are well below Caltrans' guidelines standards for potential structural damage for the types of buildings in and adjacent to the Plan Area, which consist of modern residential structures (0.5 PPV for continuous vibration sources; see Table 11). For human annoyance and interference responses, the use of typical equipment (e.g., bulldozer, jack hammer, trucks, etc.) during construction could produce vibration levels near the project site (within 50 feet) that exceed Caltrans' perceptible vibration detection threshold (0.012 PPV, see Table 12). Specific vibration-generating equipment, such as vibratory rollers which may be used during paving activities, could produce vibration levels at 50 feet that would be more pronounced and perceptible but still far below Caltrans' guidelines for structural damage to modern residential structures (0.50 PPV for continuous vibration sources).

The above vibration estimates represent potential vibration levels based on typical equipment operations and assume there is no change in elevation between work areas and receptor locations and no change in subsurface conditions that may affect vibration transmission through soil media and structures. As discussed above, the proposed project does not have the potential to result in structural damage to buildings near work areas; however, construction-related groundborne vibrations have the potential to be perceptible at buildings within approximately 200 feet of typical construction work areas and 400 feet of construction work areas involving a vibratory roller. Although some vibration associated with construction activities may be felt by nearby residential properties that surround the site, this

potential vibration effect would not be excessive because it would occur during daytime hours only (when residential properties would be less sensitive to perceived vibrations, be infrequent (occurring only when equipment is in full operation, not idling or in low power modes), be intermittent (equipment would not operate in the same location every day and would move around the site so that properties are not exposed to continuous peak vibration levels), and would not damage buildings or structures at any point. For these reasons, project construction activities would not generate excessive groundborne vibration or noise levels. This impact would be less than significant.

Once operational, the proposed project would not have any large equipment that would generate vibration. This impact would be less than significant.

c) Less Than Significant Impact. The proposed project is not located within two miles of any public or private airport or within an airport land use plan. The closest airport facility, San Gabriel Valley Airport, is located approximately 5 miles northeast of the project site. Noise from overhead flights was observed during the ambient noise monitoring conducted for the project, and the City's General Plan indicates outbound flights from Los Angeles International Airport (LAX) are known to fly over the middle of the city. LAX is located approximately 17.1 miles southwest of the project site. This intermittent aircraft related noise is not considered excessive. The project would increase the number of residential units below flight paths; however, these units would not be exposed to excessive airport-related noise levels as evidenced by hourly ambient noise levels below 60 dBA L_{eq} (see Table 9). The City's General Plan Safety Element establishes the City's overall goal and intent to reduce aircraft noise impacts on Monterey Park residents and businesses by working with surrounding jurisdictions to improve aircraft noise standards and restricting helipad locations. The implementation of these General Plan policies (Policy 14.1 and 14.2) would also help ensure potential airport and heliport noise would not be excessive at the project site. Therefore, this impact would be less than significant.

Mitigation Measures

NOI-1: **Reduce Potential Project Construction Noise Levels.** To reduce potential noise levels from project construction activities, the project proponent must:

1. *Notify Residential Land Uses of Planned Construction Activities.* This notice must be provided at least two weeks before the start of any construction activities, describe the noise control measures to be implemented by the project, and include the name and phone number of the designated contact for the project proponent and the City of Monterey Park responsible for handling construction-related noise complaints (per #5 below). This notice must be provided to the owner/occupants of residential dwelling units within 500 feet of construction work areas.

2. *Restricted Work Hours:* All construction-related work activities, including material deliveries, are subject to the requirements of MPMC Section 4.50.100. Construction activities, including deliveries, will occur only during the hours of 7 AM to 7 PM Monday to Friday and 9 AM to 6 PM on Saturday, Sunday, and holidays. The project proponent representative and/or its contractor must post a sign at all entrances to the construction site information contractors, subcontractors, other workers, etc. of this requirement.

3. *Construction Equipment Selection, Use, and Noise Control Measures*: The following measures apply to construction equipment used at the project site:

a. Contractors must use the smallest size equipment capable of safely completing work activities.
b. Construction staging will occur as far away from residential land uses as possible given site and active work constraints.
c. Electric hook-ups must be provided for stationary equipment (e.g., pumps, compressors, welding sets). If it is not feasible to provide an electric hook-up, the project proponent must ensure mitigation measures 3a and 3d are implemented.
d. All stationary noise generating equipment must be shielded and located as far as possible from residential land uses given site and active work constraints. Shielding may consist of existing vacant structures or a three-or four-sided enclosure provided the structure/enclosure breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operation.
e. Heavy equipment engines must be equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, and be maintained in accordance with manufacturer's recommendations during active construction activities.
f. Pneumatic tools must include a suppression device on the compressed air exhaust.
g. No radios or other amplified sound devices may be audible beyond the property line of the construction site.

4. *Implement Construction Activity Noise Control Measures:* The following measures apply to project construction activities:

a. Demolition: Activities must be sequenced to take advantage of existing shielding/noise reduction provided by existing buildings or parts of buildings and methods that minimize noise and vibration, such as sawing concrete blocks, prohibiting on-site hydraulic breakers, crushing or other pulverization activities, must be employed during project construction.
b. Demolition, Site Preparation, Grading, and Foundation Work: During all demolition, site preparation, grading, and structure foundation work activities, a physical noise barrier must be installed and maintained around the site perimeter to the maximum extent feasible given site constraints and access requirements. The noise barrier must extend to a height of eight feet above grade. Potential barrier options capable of reducing construction noise levels could include, without limitation:

i. A concrete, wood, or other barrier installed at-grade (or mounted to structures located at-grade, such as a K-Rail), and consisting of a solid material (i.e., free of openings or gaps other than weep holes) that has a minimum rated transmission loss value of 20 dB.
ii. Commercially available acoustic panels or other products such as acoustic barrier blankets that have a minimum sound transmission class (STC) or transmission loss value of 20 dB.
iii. Any combination of noise barriers and commercial products capable of achieving required construction noise reductions during demolition, site preparation, grading, and structure foundation work activities.
iv. The noise barrier may be removed following the completion of building foundation work (i.e., it is not necessary once framing and typical vertical

building construction begins provided no other grading, foundation, etc. work is still occurring on-site).

5. *Prepare a Construction Noise Complaint Plan:* The project proponent must prepare a Construction Noise Complaint Plan that:

    a. Identify the name and/or title and contact information (including phone number and email) for a designated project and City representative responsible for addressing construction-related noise issues.
    b. Includes procedures describing how the designated project representative will receive, respond, and resolve construction noise complaints.
    c. At a minimum, upon receipt of a noise complaint, the project representative must notify the City contact, identify the noise source generating the complaint, determine the cause of the complaint, and take steps to resolve the complaint.

4.13 Population and Housing

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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) Less than Significant Impact. The project site currently includes 14 multi-family dwelling units (13 habitable), a single family home, and an ADU. The proposed project includes 64 residential units. According to the California Department of Finance, the City of Monterey Park has 3.02 persons per household.[29] Using this measure, the project site currently houses up to 45 persons, while the proposed project would house 193 persons; a potential increase of 148 persons on the site over existing conditions. According to the Southern California Association of Governments' (SCAG) *2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*, the number of households in the City is expected to increase by 2,200 units between 2016 and 2045. Similarly, the number of persons in the City is expected to increase by 4,100 persons between 2016 and 2045. Therefore, the project would not induce substantial unplanned population growth in the area. No new expanded infrastructure is proposed that could accommodate additional growth in the area that is not already possible with existing infrastructure. Impacts would be less than significant.

b) Less than Significant Impact. The project site is located in a primarily residential portion of the City. The project site currently contains 14 multi-family units (13 habitable), a single-family home, and an ADU. The site currently has an estimated maximum capacity of 45 persons. The proposed development would displace the existing residents of the 15 habitable dwelling units. The proposed project would include 64 residential units with an estimated occupancy of 193 persons. The existing residential housing capacity of the project site is less than the proposed development housing capacity. Furthermore, new housing developments scheduled to occur within the City are projected to increase the available housing capacity. Therefore, the project would have a less than significant impact.

4.14 Public Services

Would the project 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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☑	☐
b) Police protection?	☐	☐	☑	☐
c) Schools?	☐	☐	☑	☐
d) Parks?	☐	☐	☑	☐
e) Other public facilities?	☐	☐	☑	☐

a) Less Than Significant Impact. The Monterey Park Fire Department provides fire protection and emergency medical response services in the City of Monterey Park. The fire department typically maintains a staff of up to 62 employees.[30] The project site is located approximately 0.8 miles west of the Monterey Park Fire Department Station No. 61 (350 West Newmark Avenue). The Monterey Park Fire Department allows for a response to any incident within 8 to 14 minutes. Gradual population increase throughout the City of Monterey Park is anticipated to increase the demand on fire protection services over time. With adherence to the goals and policies of the Safety and Community Services Element of the General Plan, and plan reviews conducted by the Monterey Park Fire Department, the proposed project is not anticipated to substantially impact fire protection services. In addition, technical fire prevention activities such as checking building construction plans to make sure all proposed buildings meet appropriate safety codes before construction, fire inspectors plan reviews on all proposed fire sprinkler systems, fire alarm systems would not reduce the impacts associated with the proposed project. All site plans for the proposed project would, as part of the City of Monterey Park's standard review process, be subject to approval and site-specific conditions of approval to ensure compliance with all applicable fire code standards. No new or expanded fire protection facilities would be required as a result of this project as it is not anticipated to induce substantial population increases that were not anticipated under the City's General Plan. Furthermore, the proposed project does not propose to use hazardous materials or engage in hazardous activities that would require new or modified fire protection equipment to meet potential emergency demand. Impacts related to expansion of fire protection services would be less than significant.

b) Less Than Significant Impact. The Monterey Park Police Department (MPPD) provides police protection services in the City of Monterey Park. MPPD has 72 sworn police officers and 130 civilian and volunteer personnel.[31] MPPD staffs three major divisions: Patrol, Investigative, and Administrative Support. The MPPD also utilizes volunteer programs. The MPPD Police Station is located at 320 West Newmark Avenue, approximately 0.6 miles from the project site, in the Civic Center area. The MPPD

has an estimated average response time of three minutes to high priority calls to any part of the City. The proposed residential development would not result in any unique or more extensive crime problems that cannot be handled with the existing level of police resources. The proposed project is located within the MPPD service area. No new or expanded police facilities would need to be constructed as a result of this project. Impacts related to expansion of police protection services would be less than significant.

c) Less than Significant Impact. The project site is served by the Garvey School District for elementary and intermediate school and Alhambra Unified School District for high school, respectively. The project site is within the attendance areas of the following schools: Monterey Vista Elementary School (901 E. Graves Avenue), Richard Garvey Intermediate School (2720 N. Jackson Avenue, Rosemead, CA), and Mark Keppel High School (501 East Hellman Avenue.[32, 33] Development impact fees may be levied for residential construction, pursuant to Education Code Section 17620 and California Government Code Section 65995. As stated in Government Code Section 65996, payment of school impact fees in accordance with Government Code Section 65995 and/or Education Code Section 17620 is deemed to constitute full and complete mitigation for potential impacts to schools caused by development. These fees would help to fund future needs in the districts with relation to the provision of new or physically altered districts' facilities. For these reasons, impacts related to the need for new school facilities as a result of implementing the proposed project would be less than significant.

d) Less Than Significant Impact. Demand for park and recreational facilities is generally the direct result of residential development. MPMC Section 12.10.010 requires that new developments pay a recreation and park development fee in the amount set forth by resolution of the City Council. As of 2019, Monterey Park had approximately 1.33 acres of park per 1,000 residents.[34] Listed below are public City parks within one mile of the project site.

- Barnes Park – approximately 0.52 miles southeast of the project site
- Garvey Ranch Park– approximately 0.35 miles southeast of the project site
- Sierra Vista Park
- Edison Trails Park

The proposed project would provide approximately 24,000 square feet of common open space. As a result, no substantial increase in demand for park and recreation facilities would result as recreational opportunities would be provided onsite and the project proponent would be required to pay park fees per the MPMC. Therefore, the impacts would be less than significant.

e) Less Than Significant Impact. The proposed project is served by the Monterey Park Bruggemeyer Library. The proposed project would not result in an increase in demands for more library services as the project does not propose substantial population increases that would put further demands on existing facilities or increase circulation of materials substantially. Impacts to library facilities would be less than significant.

4.15 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project 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) Less than Significant Impact. Onsite recreational areas would be provided for the proposed development in the form of approximately 24,000 square feet of common open space. The City of Monterey Park maintains and operates the existing neighborhood and regional parks or other recreational facilities within the vicinity of the proposed project. The proposed project would not significantly increase the City of Monterey Park's population and would not directly or indirectly cause the physical deterioration of any parks or other recreational facility. Furthermore, the proposed project would be subject to park/Quimby fees that would further mitigate recreational impacts. Therefore, impacts would be less than significant.

b) Less than Significant Impact. Onsite recreational areas would be provided for the proposed development in the form of approximately 24,000 square feet of common open space. The project does not include removal of any existing City of Monterey Park recreational facility or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, impacts would be less than significant.

4.16 Transportation and Traffic

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☑	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, 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 *Project Transportation Study Screening Assessment* was prepared for the proposed project by Ganddini Group, dated February 10, 2023 (see Appendix H). The information in this section is largely taken from the *Noise and Vibration Analysis*.

a) Less than Significant Impact. Table 15 (Existing Trip Generation) and Table 16 (Project Trip Generation) show the existing land uses and project trip generation for potential residential use based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Table 17 (Project Trip Generation Comparison), below, shows the comparison between existing trip generation and project trip generation. Based on review of the ITE land use descriptions, trip generation rates for Single-Family Detached Residential (ITE Land Use Code 210) and Multi-Family Housing (Low-Rise) (ITE Land Use Code 220) were determined to adequately represent the existing land uses and proposed project and were used for calculating the project trip generation forecasts. The estimates of existing and forecast project trips were determined by multiplying the ITE trip generation rates by the land use quantities.

Table 14
Existing Trip Generation

Land Use	Quantity	Unit[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Single-Family Detached Residential	2	DU	0	1	1	1	1	2	19
Multi-Family Housing (Low-Rise)	13	DU	1	4	5	4	2	6	88
		Total	**1**	**5**	**6**	**5**	**3**	**8**	**107**

Source: Ganddini, 2023 (see Appendix H)
[1] = Dwelling Unit

As shown in Table 15, the existing land uses currently generate approximately 107 daily vehicle trips, including 6 vehicle trips during the AM peak hour and 8 vehicle trips during the PM peak hour.

Table 15
Project Trip Generation

Land Use	Quantity	Unit[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Senior Adult Housing – Attached	65*	DU	6	20	26	21	12	33	438
Source: Ganddini, 2023 (see Appendix H) [1] = Dwelling Unit * Final Project design includes 64 units.									

As shown in Table 16, the proposed project is forecast to generate approximately 438 daily vehicle trips, including 26 vehicle trips during the AM peak hour and 33 vehicle trips during the PM peak hour.

Table 16
Net Trip Generation

Land Use	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Existing Land Use	1	6	7	6	4	10	114
Proposed Project	8	15	23	16	13	29	422
Net New Trips	**+7**	**+9**	**+16**	**+10**	**+9**	**+19**	**+308**
Source: Ganddini, 2023 (see Appendix H)							

As shown in Table 17, the proposed project is forecast to generate approximately 331 additional daily vehicle trips compared to existing project site uses, including 20 additional vehicle trips during the AM peak hour and 25 additional vehicle trips during the PM peak hour.

Criteria for Preparation of Traffic Impact Analyses

According to the City of Monterey Park *Transportation Impact Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (September 2020) "[the City TIA Guidelines"], certain types of projects, because of their size, nature, or location, are exempt from the requirement of preparing a traffic impact analysis.

Level of Service (LOS) Analysis

The City of Monterey Park has established guidelines for Level of Service (LOS) impact for General Plan operational compliance. As specified in the City TIA Guidelines, a traffic impact analysis is required based on the following five factors:

1. A traffic study is required for new developments or for the expansion of existing developments which are forecast to generate a minimum of 50 vehicles per hour (total two-way) during the greater of the AM or PM peak hours.
2. A traffic study will be required for all developments, regardless of size, located within 300 feet of the intersection of two arterial streets, as defined in the General Plan or for any developments fronting on two different streets, regardless of classification.
3. The presence of an existing or future traffic safety problem will require a traffic study.
4. The location of the developments in an environmentally or otherwise sensitive area, or in an area that generates controversy will require a traffic study.

5. The presence of a nearby substandard intersection or street will require a traffic study. The substandard condition is normally considered to be level of service "D" or worse.

Traffic Impact Analysis Requirement Analysis

The criteria described in the section above were used to determine whether a traffic study was required for the proposed project. The proposed project is projected to generate less than 50 new AM or PM peak hour trips. The project site is not located within 300 feet of the intersection of two arterial streets and does not front two different streets. Therefore, criteria number 1 and 2 are not met. Criteria 3 and 4 are qualitative in nature and are not anticipated to be met by the proposed project. Criterion 5 is unknown without an existing analysis of the nearby roadway network but is not anticipated to be met by the addition of project traffic. Based on the minimal net trip increase, the project would not appreciably worsen any of the considerations in criteria 3 through 5. Therefore, the project reasonably meets the criteria for exemption from a traffic impact analysis based on City of Monterey Park TIA Guidelines and impacts are presumed to be less than significant.

b) Less than Significant Impact. Following the passage of California Senate Bill 743 (SB 743), which was signed into law in 2013, the State of California's Governor's Office of Planning and Research (OPR) was tasked with developing new guidelines for evaluating transportation impacts under the California Environmental Quality Act (CEQA). These guidelines were intended to shift the performance metric from automobile delay and level of service (LOS) to one that would promote the reduction of greenhouse gas emissions and the development of multimodal and diverse transportation networks. As a result, OPR determined that, under the CEQA guidelines vehicle miles traveled (VMT) would be established as the primary metric for evaluating environmental and transportation impacts. In December 2018, OPR published the revised CEQA Guidelines incorporating the transition to VMT, along with the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) (the "Technical Advisory") to assist with the implementation of the revised CEQA Guidelines. In this document, OPR outlines the trip types that should be analyzed as contributing to a project's VMT for different land use types. For example, the Technical Advisory suggests VMT associated with home-based trips be considered for residential projects, while home-based-work VMT should be considered for office projects. The Technical Advisory also suggests that VMT be evaluated on a per capita or per employee basis and projects should target a 15 percent reduction in VMT. Finally, OPR provides screening criteria which can be applied in order to determine which projects can automatically be assumed to have a less than significant VMT impact. Should a project meet any of the following criteria, the project would not require further VMT analysis:

1. The project generates fewer than 110 net daily trips.
2. The project is located in an area of low VMT and exhibits similar features to the surrounding uses.
3. The project is located within a Transit Priority Area (within one-half mile of an existing major transit stop or an existing stop along a high quality transit corridor).

The project VMT impact has also been assessed in accordance with the City TIA Guidelines. The City TIA Guidelines establish screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018). The City TIA Guidelines specify the following three screening steps:

1. Transit Priority Area (TPA) Screening;
2. Low VMT Area Screening; and
3. Project Type Screening.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the City;
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency with input from the Southern California Association of Governments [SCAG]): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Gabriel Valley Council of Governments (SGVCOG) VMT Screening Tool was used to determine if the project is located within a TPA. The project site is not located within a TPA based on the SGVCOG VMT Screening Tool assessment. Therefore, the proposed project does not satisfy the City-established screening criteria for projects located within a TPA.

Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area. For this screening in the SGVCOG VMT Screening Tool, the Southern California Association of Governments Regional Travel Demand Model was used to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs). TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

The proposed project is consistent with existing residential land uses in the TAZ and there does not appear to be anything unique about the project that would otherwise be misrepresented utilizing the data from the SGVCOG VMT Screening Tool. In accordance with the City TIA Guidelines, a low VMT area for residential projects is defined as a TAZ where VMT per service population does not exceed 15 percent below the current SGVCOG jurisdictional baseline VMT per service population. Exhibit A of the project *Transportation Study Screening Assessment* shows the SGVCOG VMT Screening Tool results for the project site (see Appendix H). Based on the SGVCOG VMT Screening Tool assessment, the proposed project is located within TAZ 22148100. The project TAZ 2023 Total VMT per service population is equal to 21.6. The jurisdictional 2023 Total VMT per service population is equal to 34.78. Therefore, the project VMT does not exceed 15% below the SGVCOG jurisdictional baseline VMT per service population. The proposed project satisfies the City-established screening criteria for projects located in low VMT areas and may be presumed to result in a less than significant VMT impact.

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact. The following uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local-serving K-12 schools
- Local parks
- Day care centers
- Local-serving retail uses less than 50,000 square feet, including:
    - Gas stations
    - Banks
    - Restaurants
    - Shopping center
- Local-serving hotels (e.g., non-destination hotels)
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (Public libraries, fire stations, local government)
- Affordable, supportive, or transitional housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Student housing projects on or adjacent to college campuses
- Other local-serving uses as approved by the City Traffic Engineer
- Projects generating less than 110 daily vehicle trips
- This generally corresponds to the following "typical" development potentials:
    - 11 single family housing units
        - 16 multi-family, condominiums, or townhouse housing units
        - 10,000 square feet of office
        - 15,000 square feet of light industrial
        - 63,000 square feet of warehousing
        - 79,000 square feet of high cube transload and short-term storage warehouse

The project site is not local-serving retail and is also not a land use that meets the thresholds listed as being presumed to have a less than significant impact. Therefore, the proposed project does not satisfy the City-established screening criteria for project type screening.

Conclusion

The proposed project satisfies the City-established screening criteria for projects located in low VMT areas and may be presumed to result in a less than significant VMT impact.

c) No Impact. A significant impact would occur if the project substantially increased an existing hazardous design feature or introduced incompatible uses to the existing traffic pattern. Access to the project site would be provided by two driveways – a 26-foot wide driveway at the northwest corner of the site and a 20-foot wide driveway at the southwest corner of the site – along South Alhambra Avenue. The design of the project would comply with all applicable City regulations. Furthermore, the project does not involve changes in the alignment of South Alhambra Avenue, nor does it create hazardous geometric design features. No impact would occur.

d) Less than Significant Impact. A significant impact would occur if the design of the project would not satisfy emergency access requirements of the Monterey Park Fire Department or in any other way threaten the ability of emergency vehicles to access and serve the project site or adjacent uses. As discussed above, access to the project site would be provided by two driveways – a 26-foot wide driveway at the northwest corner of the site and a 20-foot wide driveway at the southwest corner of the site – along South Alhambra Avenue. The driveway widths are sufficient to provide access to fire and emergency vehicles are consistent with the California Fire Code requiring a minimum of 18 feet. All

access features are subject to and must satisfy the City of Monterey Park design requirements, including the Fire Department's requirements. Therefore, the project would result in less than significant impacts with regard to emergency access.

4.17 – Tribal Cultural Resources

Would the project 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 Cultural Native American tribe, and that is:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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	☐	☐	☐	☑
b) 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) No Impact. A significant impact would occur if the proposed project would cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Resources of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). Results of the cultural resources records research conducted at the South-Central Coastal Information Center (SCCIC), a part of the California Historical Resources Information System (CHRIS), indicate that there no known historic resources existing within the project boundaries or within a one-half mile radius of the project site. The historic resources records search of the project area shows there are two (2) historic built environments (P19-187961: religious structure/church and P-19-19-0254: commercial building) located within a one half-mile radius of the project site (see Appendix B). However, neither of these historic structures would be impacted by the proposed project either directly or indirectly. In addition, the City of Monterey Park does not have any structures eligible for listing in the National or California Registers under any of the significance criteria. Therefore, the project would not result in an adverse change in the significance of a historical resource as defined in CEQA §15064.5. No impact would occur.

b) Less than Significant Impact with Mitigation Incorporated. Government Code §§ 65352.3 and 65562.5 (SB 18); and Public Resources Code §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 (AB 52) provide that a project that may cause a substantial adverse change to a defined Tribal Cultural Resource (TCR) can result in a significant effect on the environment. AB 52 requires tribes interested in development projects within a traditionally and culturally affiliated

geographic area to notify a lead agency of such interest and to request notification of future projects subject to CEQA before determining if a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. The Lead Agency is required to notify tribes within 14 days of deeming a development application complete subject to CEQA to notify the requesting tribe as an invitation to consult on the project. AB 52 identifies examples of mitigation measures that would avoid or minimize impacts to TCR. The bill makes the above provisions applicable to projects that have a notice of preparation or a notice of intent to adopt a negative declaration/mitigated negative declaration circulated on or after July 1, 2015.

Although there is no indication of TCRs at the project site, AB 52 is clear in stating that it is the responsibility of the Public Agency (i.e., Lead Agency) to consult with Native American tribes early in the CEQA process to allow tribal governments, lead agencies, and project proponents to discuss the appropriate level of environment review, identify and address potential adverse impacts to TCRs, and reduce the potential for delay and conflict in the environmental review process (see Public Resources Code Section 2108.3.2). Specifically, government-to-government consultation may provide "tribal knowledge" of the project area that can be used in identifying TCRs that cannot be obtained through other investigative means. Pursuant to AB 52, the City of Monterey Park submitted notification to the following tribal governments that may have traditional/cultural use of the project site: the Gabrieleno Band of Mission Indians – Kizh Nation, the Gabrielino Tongva San Gabriel Band of Mission Indians, and the Gabrielino-Tongva Tribe. Notices were submitted to tribal cultural representatives via certified mail (see Appendix I). The City received one response letter from the Kizh Nation requesting tribal consultation and incorporation of mitigation measures. As of the writing of this document, the City has received no other responses from the Native American community concerning the proposed project. Despite the heavy disturbances of the project area that may have displaced or submerged archaeological resources relating to TCRs on the surface, it is possible that intact tribal cultural resources exist at depth. Due to this uncertainty, **Mitigation Measures CUL-1** through **CUL-8** are incorporated to address any previously undiscovered archaeological resources relating to TCRs encountered during project implementation. Incorporation of these mitigation measures would ensure that potential impacts to buried TCRs are less than significant through requirements for evaluation, salvage, curation, and reporting.

4.18 – Utilities and Service Systems

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water 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) Less than Significant Impact. The project would require water, wastewater collection and treatment, storm water drainage, electrical power, natural gas, and telecommunication facilities. An analysis of impacts related to these services is provided below.

Water

The project site currently contains 14 multi-family dwelling units (13 habitable), a single-family home, and an ADU. The proposed project would include the development of 64 condominium units. As such, the proposed project would increase the intensity of uses on the project site, resulting in increased water use. CalEEMod default water usage rates were used to estimate the anticipated water demand of the

proposed project. Based on the CalEEMod generation rates, water use per day during project operation would be approximately 7,164 gallons per day (see Appendix A). The project site is within the water service boundaries of the City's Water Utility Division. The Water Utility Division is responsible for the production and distribution of the city's water supply and the maintenance of all water system facilities. The city's water system supplies water to over 95% of Monterey Park's residents and businesses. Private water companies service the remaining portions of the city. According to the City's 2020 Urban Water Management Plan (UWMP), the reliable quantities of projected water supply for Year 2025 and Year 2030 are 8,421 acre-feet per year (AFY) and 8,514 AFY, respectively.[35] As estimated above, the project would consume approximately 7,164 gallons of water per day, which equates to approximately 2,614,934 gallons of water per year, or 8.0 AFY. The estimated water consumption of the proposed project is well within the Water Utility Division's projected water supply for 2025 and 2030 and would not, therefore, significantly impact existing water service. Further, the project site would be redeveloped in compliance with the California Green Building Code (which implements water efficiency standards for appliances and fixtures), which would further reduce project water usage. For these reasons, the proposed project would not require or result in the construction of new water facilities. Impacts would be less than significant

Wastewater

The proposed project would connect to water service provided by the City's Water Utility Division and would deliver sewage into the City's sewer collection system operated and maintained by the City's Public Works Department. The Sanitation Districts of Los Angeles County (LACSD) manages, operates, and maintains the larger sewer trunk lines into which the City's collection system feeds. Wastewater generation on site is estimated to be equivalent to indoor water demand. As such, the project would generate approximately 5,371 gallons of wastewater per day (see Appendix A). Although the proposed project would include construction of water and wastewater distribution and collection facilities necessary to serve the development (i.e., pipes, valves, meters, etc.), Los Angeles Regional Water Quality Control Board wastewater treatment requirements, as well as State Water Resources Control Board Division of Drinking Water potable water treatment requirements, are applicable to the service providers rather than the proposed project itself.

The Water Utility Division and its water providers, as well as the City's Public Works Department and the LACSD, are required to treat potable water and wastewater in accordance with federal, state ,and local regulations. For example, sewage generated by the proposed project would be treated in accordance with applicable waste discharge requirements before being discharged. Both the City of Monterey Park and the County of Los Angeles are subject to compliance with State Water Resources Control Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended. State Water Resources Control Board Order No. 2006-0003-DWQ establishes performance criteria and effluent limitations to ensure that treated effluent discharges do not violate basin plan objectives for receiving waters. The order ensures that the City and the LACSD properly maintain and manage sewer systems and reduce frequency and severity of sanitary sewer overflows and their potential impacts on public health, safety, and the environment. The water and sewer fees paid by the project proponent would be used by the utility providers, at least in part, to fund projects and programs necessary to meet their regulatory obligation with respect to treatment requirements, treatment capacity, and supply reliability. Because the proposed project would be serviced by regional water/sewer providers (rather than proposing on-site treatment), the potential impact with respect to wastewater treatment requirements would be less than significant.

Stormwater

Construction of the proposed project would increase the net area of impervious surfaces on the site; therefore, increased discharges to the City's existing storm drain system would likely occur. As described under Sections 4.10(a) and 4.10(c), the drainage patterns of the site would not substantially change relative to existing conditions. The existing residences on the project site would be replaced with 64 condominium units and associated pavement, parking, and landscaping. Runoff from the developed site would result in increased potential water contamination from urban pollutants that are commonly found in surface parking lots, ornamental landscape planters and from atmospheric buildup on rooftops. The proposed project would drain the site into South Alhambra Avenue where there is an existing storm drain system. In accordance with the City's Stormwater Quality and Urban Runoff Control Ordinance and with the current Los Angeles Municipal NPDES permit, the project proponent would be required to prepare and comply with a Low Impact Development Plan (see Appendix G). Compliance with the City's Stormwater Quality and Urban Runoff Control Ordinance would reduce the peak volume of stormwater runoff discharged into the City's storm drain system and would ensure that stormwater is retained on-site, to the extent feasible. As such, the proposed project would not require the construction or expansion of off-site storm water drainage facilities, as the project would not contribute a substantial amount of new stormwater runoff relative to existing conditions. Impacts would be less than significant.

Electric Power

The project site would be serviced by Southern California Edison (SCE). The project site would connect to the existing power grid. New electrical connections to the project site would be installed via underground lines. Although the project would require new electrical line tie-ins for service, it would not result in the need for new electrical substations or electrical generating facilities. SCE conditions of service would apply to the proposed project. Therefore, the project would have a less than significant impact.

Natural Gas

The Southern California Gas Company (Gas Company) would provide natural gas services to the project site. The majority of the gas supply is transported via transmission pipelines owned by private companies. The project site would utilize the existing Gas Company distribution grid to service the project. All new connections and service installations would be reviewed and approved by the Gas Company and the City Public Works Department. Although the project would require new natural gas service connections, it would not result in the need for new natural gas supplies or infrastructure. Therefore, the project would have a less than significant impact.

Telecommunication Facilities

The project site is supported by telecommunication services for a variety of providers. Spectrum Communication provides residential and business services to the project area. Fiber optic cables and high-speed connection services from wireless providers such as Spectrum Communications are available to service the project site. The project site would be required to comply with all Federal, State, and local regulations for installation and wiring of telecommunications to the project. With adherence to existing City and state Electrical, Building and Safety code requirements, the project would have a less than significant impact.

b) Less than Significant Impact. As discussed in Section 4.18(a), the proposed project operation is anticipated to require approximately 7,164 gallons of water per day, or 8.0 AFY. The proposed project would connect to municipal water service provided by the City of Monterey Park Water Utility Division.

The City's water system supplies potable water to over 95 percent of Monterey Park's residents and businesses. One hundred percent of the City's water supply is produced from the Main San Gabriel Basin (Main Basin). Water Code Section 10910-10915 requires the preparation of a water supply assessment (WSA) demonstrating sufficient water supplies for any subdivision that involves the construction of more than 500 dwelling units, or the equivalent thereof. As the project includes 64 dwelling units it is below the established thresholds, and no WSA is required.

The Monterey Park Water Utility Division is a Public Water System and is regulated by the State Water Resources Control Board. It would provide water to the proposed project. The City cannot pump more than its allowed annual pumping right of 8,421-acre feet per year (AFY). If the City pumps more than the allowed amount of water, replacement water must be purchased. The City also purchases groundwater from San Gabriel Valley Water Company. The current water usage in Monterey Park is expected to remain fairly constant due to the built-out nature of the City. The City of Monterey Park's proposed water use for the next 20 years is estimated not to exceed 8,804 AFY, an increase of 383 AFY. Based on the CalEEMod assumptions, the proposed project's estimated water demand is approximately 8.0 AFY. The 2020 Urban Water Management Plan anticipates an increase in demand in the area. Projected water supply for Year 2025 and Year 2030 are 8,421 AFY and 8,514 AFY, respectively. The estimated water consumption of the proposed project is well within the Water Utility Division's projected water supply for 2025 and 2025. Thus, the Water Utility Division would have sufficient supplies to serve the proposed project and no new or expanded entitlements would be required. The proposed project would also be required to pay development impact fees to offset any project impacts to existing infrastructure and fund future expansion. Further, the project site would be redeveloped in compliance with the California Green Building Code (which implements water efficiency standards for appliances and fixtures), which would further reduce water usage. For these reasons, impacts would be considered less than significant.

c) Less than Significant Impact. As previously discussed in Section 4.18(a), the proposed project would connect to water service provided by the City's Water Utility Division and would deliver sewage into the City's sewer collection system operated and maintained by the City's Public Works Department and treated by the LACSD. Wastewater generated at the project site would be treated at the Joint Water Pollution Control Plant (JWPCP). The wastewater generated by the proposed project would be nominal and would not exceed the current capacity of this wastewater plant. As such, impacts would be less than significant.

d) Less than Significant Impact. Significant impacts could occur if the proposed project would exceed the existing permitted landfill capacity or violates federal, state, and local statutes and regulations. Solid waste disposal services for the project site would be provided by Athens Services (Athens) and/or Ware Disposal (Ware). Athens and Ware offer waste and recycling collection, green waste recycling programs, organics waste composting, special waste transportation, and transfer and materials recovery services to the City as well as many other areas in Southern California. The proposed project would include the development of 64 condominium units and associated improvements. Based on the default CalEEMod solid waste generation rates, the proposed project would generate approximately 48 tons of solid waste per year (see Appendix A). Solid waste generated by the proposed project would be collected by Athens and transported to a local or regional landfill. The increase in solid waste generation from implementation of the proposed project would be minimal. Regional landfills in the Los Angeles area are anticipated to have sufficient capacity to accommodate the minor increase in solid waste generation attributable to the proposed project.[36] Additionally, Monterey Park Municipal Code Section (Collector Requirements) requires that at least 75% of all building and demolition materials (wood, metal, electrical, piping, glass, drywall, asphalt, concrete) be recycled for purposes of compliance with the California Integrated Waste Management Act of 1989. Required compliance with this regulation would reduce the project's solid waste generation during construction. Combined remaining capacities

at the landfills would be adequate to accommodate the proposed project. For these reasons, solid waste impacts resulting from the construction and operation of the proposed project would be considered less than significant.

e) Less than Significant Impact. The project proponent is required to comply with all local, state, and federal requirements for integrated waste management (e.g., recycling, green waste) and solid waste disposal. The project would be required to comply with the City's Recycling and Waste Handling Requirement for construction and demolition debris, which requires at least 75% of all building and demolition materials to be recycled. Athens Services currently transports all of Monterey Park's recycling to a Material Recovery Facility, where recyclable materials are sorted and then diverted from local landfills.[37] The proposed residential use would not generate hazardous waste of any kind. Monterey Park commercial and residential uses that are serviced by Athens Services are already in compliance with AB 341. Therefore, a less than significant impact would occur.

4.19 – Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation 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) No Impact. The proposed project is located in an area that is fully developed and not considered a high fire-threat area. No native vegetation occurs on the project site, and the street trees located along South Alhambra Avenue are maintained by the City of Monterey Park Public Works Department and therefore would not contribute significantly to fire threat. The proposed project would be served by the City of Monterey Park Fire Department, and further supported by the Los Angeles County Fire Department should wildfires occur. The project site is not located within a fire hazard zone, as identified on the latest Fire Hazard Severity Zone (FHSZ) maps prepared by the California Department of Forestry and Fire Protection (CALFIRE). Further, the project site and surrounding area is not identified as being within or near any State Responsibility Area (SRA) on CALFIRE maps.[38] Therefore, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan and no impact would occur.

b) No Impact. As discussed above, the project site is not located within a fire hazard zone, as identified on the latest FHSZ maps prepared by CALFIRE. There are no wildland conditions in the urbanized area where the project site is located. Therefore, the project would not exacerbate wildfire risks, thereby

exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur.

c) No Impact. The project site is not located within or near any State Responsibility Areas. As a result, none of the project improvements would exacerbate fire risk or would result in a temporary or ongoing impact from wildfires requiring the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No impact would occur.

d) No Impact. The project site is not located within or near any State Responsibility Areas. The project site is also not located in any FEMA 100-year flood floodplain. No impact would occur.

4.20 – Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to 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, 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?	☐	☑	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐

a) Less than Significant with Mitigation Incorporated. The proposed project would not significantly impact any scenic vistas, scenic resources, or the visual character of the area, as discussed in Section 4.1, and would not result in excessive light or glare. The project site is located within a suburbanized area with no significant natural habitat onsite. The project would not significantly impact any sensitive plants, plant communities, fish, wildlife, or habitat for any sensitive species after incorporation of **Mitigation Measure BIO-1**, as discussed in Section 4.4. Adverse impacts to archeological resources would be less than significant with implementation of **Mitigation Measures CUL-1** through **CUL-8**. Adverse impacts to paleontological resources would be less than significant with implementation of **Mitigation Measures GEO-1** through **GEO-4**. With the implementation of these mitigation measures, the proposed project would not have a significant adverse impact with respect to the degradation of the quality of the environment. The proposed project would not restrict the levels of fish and wildlife below sustaining levels or threaten to eliminate a plant or wildlife community. No sensitive species are known to occupy the proposed project site. No rare or endangered plants or animals are known to occur on the project site or would be removed as a result of the proposed project.

b) Less than Significant with Mitigation Incorporated. Cumulative impacts can result from the interactions of environmental changes resulting from one proposed project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public services, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long term, due to the permanent land use changes and operational

characteristics involved with the project. Cumulative impacts would be less than significant with mitigation incorporated, as further discussed herein.

Aesthetics
Impacts related to aesthetics at the project-level have no potential for cumulative impacts because impacts are limited to on-site conditions and include no component that could result in similar impacts over time or space. Therefore, no cumulative impacts related to this topic would occur.

Agricultural Resources
The analysis provided in Sections 4.2 found that no individual impacts would occur; therefore, the project could not contribute considerably to local agricultural or forestry.

Air Quality
The analysis provided in Section 4.3 related to air quality and sensitive receptors found that impacts would be less than significant with incorporation of **Mitigation Measure AIR-1**. With mitigation incorporated, the project would not contribute considerably to cumulative air quality impacts in the region. The project would have no other air quality impacts.

Biological Resources
The analysis provided in Section 4.4 found that no individual impacts to sensitive species would occur with implementation of **Mitigation Measure BIO-1**. With mitigation, the project would not contribute considerably to regional impacts on migratory birds or any sensitive species. The project would have no other impacts on biological resources.

Cultural Resources
Loss of on-site archaeological resources could reduce or eliminate important information relevant to the County of Los Angeles and the City of Monterey Park. Impacts related to archaeological resources were found to be potentially significant and require mitigation to reduce to less than significant levels. Therefore, the project could contribute considerably to significant localized cumulative impacts in this topic area. **Mitigation Measures CUL-1** through **CUL-8** are incorporated into the project requiring evaluation of any discovered potential cultural or archaeological resources, the uniqueness of the sample, and appropriate steps to preserve or curate the artifact. This would eliminate any potential loss of important local cultural or archaeological information that may be buried under the project site. Therefore, the project would have no contribution to a cumulative loss of important local or regional archaeological knowledge.

Energy
The analysis provided in Section 4.6 related to energy found that impacts would be less than significant. Therefore, the project would not contribute to cumulative energy impacts.

Geology and Soils
Impacts related to geology at the project-level have no potential for cumulative impacts because impacts are limited to on-site conditions and include no component that could result in similar impacts over time or space. Loss of on-site paleontological resources could reduce or eliminate important information relevant to the County of Los Angeles and the City of Monterey Park. Impacts related to paleontological resources were found to be potentially significant and require mitigation to reduce to less than significant levels. Therefore, the project could contribute considerably to significant localized cumulative impacts in this topic area. **Mitigation Measures GEO-1** through **GEO-4** are incorporated into the project requiring evaluation of any discovered potential cultural or paleontological resources, the uniqueness of the sample, and appropriate steps to preserve or curate the artifact. This would eliminate any potential loss of important local cultural or paleontological information that may be buried under the project site.

Therefore, the project would have no contribution to a cumulative loss of important local or regional paleontological knowledge. No other cumulative impacts related to this topic would occur.

Greenhouse Gas Emissions
As discussed in Section 4.8, climate change is the result of numerous, cumulative sources of greenhouse gas emissions all over the world. The project would not contribute considerably to global climate change.

Hazardous Materials
The analysis provided in Section 4.9 related to hazards and hazardous materials found that impacts would be less than significant. Compliance with all regulations related to the disposal and storage of household waste would ensure that impacts would be less than significant. Therefore, the project would not contribute to localized or regional cumulative impacts related to hazardous materials.

Airport Hazards
Impacts related to airport hazards at the project-level have no potential for cumulative impacts because impacts are limited to on-site conditions and include no component that could result in similar impacts over time or space. Therefore, no cumulative impacts related to this topic would occur.

Wildfires
The analysis provided in Section 4.8(h) and Section 4.20 (Wildfire) found that no individual, local, or regional impacts would occur; therefore, no cumulative impacts related to this topic would occur.

Groundwater Levels
The analysis provided in Section 4.10 (a) found that less than significant local, or regional impacts would occur; therefore, while the project would contribute to individual, localized or regional cumulative impacts, the project contribution would not be considerable.

Drainage/Water Quality
The analysis provided in Section 4.10, found that less than significant individual, local, or regional impacts would occur; therefore, while the project would contribute to individual, localized or regional cumulative impacts, the project contribution would not be considerable.

Flooding
The analysis provided in Section 4.10, found that no regional impacts would occur; therefore, no cumulative impacts related to this topic would occur.

Land Use and Planning
The analysis provided in Section 4.11 related to Land Use and Planning found that impacts would be less than significant; therefore, while the project would contribute to individual, localized or regional cumulative impacts, the project contribution would not be considerable.

Mineral Resources
The analysis provided in Section 4.12 related to mineral resources found that impacts there would be no impact; therefore, while the project would contribute to localized or regional cumulative impacts, the project contribution would not be considerable.

Noise
The project is not a substantial source of operational noise, as discussed in Section 4.13(a), and therefore would not contribute considerably to noise levels in the immediate vicinity of the project. The project would contribute to temporary increases in noise levels in the immediate project vicinity during

construction activities; however, these would be reduced to less than significant through incorporation of **Mitigation Measure NOI-1**. The project would increase traffic in the project area; however, project traffic-related noise would not be discernible to the public and therefore would have no considerable contribution to cumulative traffic-related noise. With mitigation incorporated, the project would not contribute considerably to regional noise impacts. The project would have no other impacts related to noise.

Population and Housing
The analysis provided in Section 4.14 related to Population and Housing found that no impacts would result; therefore, no cumulative impacts related to this topic would occur.

Public Services
The analysis provided in Section 4.15 related to Public Services found that impacts would be less than significant; therefore, while the project would contribute to localized cumulative impacts, the project contribution would not be considerable.

Recreation
The analysis provided in Section 4.16 related to Recreation found that impacts would be less than significant; therefore, while the project would contribute to localized cumulative impacts, the project contribution would not be considerable.

Traffic and Transportation
The analysis provided in Section 4.17 found impacts related to transportation to be less than significant. The project's contribution to cumulative impacts to local and regional transportation facilities would not be considerable.

Tribal Cultural Resources
Loss of on-site tribal cultural resources could reduce or eliminate important information relevant to the County of Los Angeles and the City of Monterey Park. Impacts related to tribal cultural resources were found to be potentially significant and require mitigation to reduce to less than significant levels. Therefore, the project could contribute considerably to significant localized cumulative impacts in this topic area. **Mitigation Measures CUL-1** through **CUL-8** are incorporated into the project requiring evaluation of any discovered potential archaeological or tribal cultural resources, the uniqueness of the sample, and appropriate steps to preserve or curate the artifact. This would eliminate any potential loss of important local archaeological or tribal cultural information that may be buried under the project site; therefore, the project would have no contribution to a cumulative loss of important local or regional archaeological or tribal cultural knowledge.

Utilities and Service Systems
The analysis provided in Section 4.19 related to Utilities and Service Systems found that impacts would be less than significant; therefore, while the project would contribute to localized or regional cumulative impacts, the project contribution would not be considerable.

Wildfire
The analysis provided in Section 4.20 related to wildfire found that impacts would not occur. Therefore, the project would not contribute to local or regional cumulative impacts.

c) Less than Significant with Mitigation Incorporated. Based on the analysis of the project's impacts in the responses to items 4.1 through 4.20, there is no indication that this project could result in substantial adverse effects on human beings. Long-term effects include increased vehicular traffic, traffic-related noise, use of household hazardous materials, emissions of criteria pollutants and

greenhouse gas emissions. The analysis herein concludes that direct and indirect environmental effects on humans would be less than significant.

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5 Mitigation Summary

AIR-1: **Reduce Construction-Related DPM Emissions.** To reduce potential short-term adverse health risks associated with PM_{10} exhaust emissions generated during project construction activities, including emissions of diesel particulate matter (DPM), the project proponent and/or it's designated contractors, contractor's representatives, or other appropriate personnel to implement the following construction equipment restrictions for the project:

1. Contractors must use the smallest size equipment capable of safely completing work activities.
2. Electric hook-ups must be provided for stationary equipment (e.g., pumps, compressors, welding sets).
3. The use of portable diesel generators must be prohibited at the project site.
4. All construction equipment with a rated power-output of 50 horsepower or greater must meet U.S. EPA and CARB Tier IV Final Emission Standards for PM_{10}. This may be achieved via the use of equipment with engines that have been certified to meet Tier IV emission standards, or through the use of equipment that has been retrofitted with a CARB-verified diesel emission control strategy (e.g., particulate filter) capable of reducing exhaust PM_{10} emissions to levels that meet Tier IV standards.

As an alternative to using equipment that meets Tier IV Final Emissions Standards for off-road equipment with a rated power-output of 50 horsepower or greater, the project proponent may prepare and submit a refined construction health risk assessment to the City once additional project-specific construction information is known (e.g., specific construction equipment type, quantity, engine tier, and runtime by phase). The refined health risk assessment must demonstrate and identify any measures necessary such that the proposed project's incremental cancerogenic health risk at nearby sensitive receptor locations is below the applicable SCAQMD threshold of 10 cancers in a million.

BIO-1: If vegetation removal is scheduled during the nesting season (typically February 1 to September 1), then a focused survey for active nests must be conducted by a qualified biologist not more than five days before the beginning of project-related activities (e.g., demolition, excavation, grading and vegetation removal). Surveys must be conducted in proposed work areas, staging and storage areas, and soil, equipment, and material stockpile areas. For passerines and small raptors, surveys must be conducted within a 250-foot radius surrounding the work area (in non-developed areas and where access is feasible). For larger raptors, such as those from the genus *Buteo*, the survey area must encompass a 500-foot radius. Surveys must be conducted by a qualified biologist during weather conditions suited to maximize the observation of possible nests and concentrate on areas of suitable habitat. If a lapse in project-related work of five days or longer occurs, an additional nest survey is required before work can be reinitiated. If nests are encountered during any preconstruction survey, a qualified biologist must determine if it may be feasible for construction to continue as planned without impacting the success of the nest, depending on conditions specific to each nest and the relative location and rate of construction activities. Any nest(s) within the project site must be monitored by a qualified biologist, as determined in the sole and absolute discretion of the City, during vegetation removal if work is occurring directly adjacent to the pre-determined no-work buffer. If the qualified biologist determines construction activities have potential to adversely affect a nest, the biologist will immediately inform the construction manager to

halt construction activities within minimum exclusion buffer of 50 feet for songbird nests, and 200 to 500 feet for raptor nests, depending on species and location. Construction activities within the no-work buffer may proceed after a qualified biologist determines the nest is no longer active due to natural causes (e.g., young have fledged, predation or other non-anthropogenic nest failure).

CUL-1: **Retain a Native American Monitor/Consultant:** The project proponent is required to retain and compensate for the services of a Tribal monitor/consultant who is both approvedby the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. This list is provided by the NAHC. The monitor/consultant would only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, without limitation, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant would complete daily monitoring logs that would provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring would end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant state in writing that the site has a low potential for impacting Tribal Cultural Resources.

CUL-2: **Unanticipated Discovery of Tribal Cultural and Archaeological Resources:** Upon discovery of any archaeological resources, all construction activities in the immediate vicinity of the find must cease until the find can be assessed. All archaeological resources unearthed by project construction activities would be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation would coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe would request reburial or preservation for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources would with CEQA Guidelines Section 15064.5(f) for historical resources and archaeological resources.

CUL-3: **Public Resources Code Sections 21083.2(b) for unique archaeological resources.** Preservation in place (i.e., avoidance) is the preferred manner of treatment upon discovering unique archaeological resources. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin must be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they would be offered to a local school or historical society in the area for educational purposes.

CUL-4: **Resource Assessment & Continuation of Work Protocol:** Upon discovery, the tribal and/or archaeological monitor/consultant/consultant would immediately divert work at minimum of 150 feet and place an exclusion zone around the burial. The monitor/consultant(s) would then notify the Tribe, the qualified lead archaeologist, and the construction manager who would call the coroner. Work would continue to be diverted while the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner would notify the NAHC as mandated by state law who would then appoint a Most Likely Descendent (MLD).

CUL-5: **Unanticipated Discovery of Human Remains and Associated Funerary Objects:** Native American human remains are defined in Public Resources Code ("PRC") Section 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC Section 5097.98, are also to be treated according to this statute. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material must be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she must contact by telephone within 24 hours, the Native American Heritage Commission (NAHC) and also comply with PRC Section 5097.98.

CUL-6: **Kizh-Gabrieleno Procedures for burials and funerary remains:** If the Gabrieleno Band of Mission Indians-Kizh Nation is designated MLD, the following treatment measures would be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, without limitation, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

CUL-7: **Treatment Measures:** Before ground disturbing activities continues, the land owner must arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains would be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe would make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials would be removed. The Tribe would work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation would be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation must be approved by the Tribe for data recovery purposes. Cremations would either be removed in bulk or by means as necessary to ensure complete recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan would be created. Once complete,

a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive diagnostics on human remains. Each occurrence of human remains and associated funerary objects would be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony would be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation must be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There cannot be publicity regarding any cultural materials recovered.

CUL-8: **Professional Standards:** Archaeological and Native American monitoring and excavation during construction projects would be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects must be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist must ensure that all other personnel are appropriately trained and qualified.

GEO-1: **Conduct Paleontological Sensitivity Training for Construction Personnel.** The Applicant must retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to conduct a Paleontological Sensitivity Training for construction personnel before commencement of excavation activities. The training would include a handout and would focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and the general steps a qualified professional paleontologist would follow in conducting a salvage investigation if one is necessary.

GEO-2: **Conduct Periodic Paleontological Spot Checks During Grading and Earth-Moving Activities.** The Applicant must retain a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to conduct periodic Paleontological Spot Checks beginning at depths below six feet from the surface to determine if construction excavations extend into older Quaternary deposits. After the initial Paleontological Spot Check, further periodic checks would be conducted at the discretion of the qualified paleontologist. If the qualified paleontologist determines that construction excavations have extended into the older Quaternary deposits, construction monitoring for Paleontological Resources are required. The Applicant must retain a qualified paleontological monitor, who would work under the guidance and direction of a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology. The paleontological monitor must be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into the older Pleistocene alluvial deposits. Multiple earth-moving construction activities may require multiple paleontological monitors. The frequency of monitoring is based on the rate of excavation and grading activities, proximity to known paleontological resources and/or unique geological features, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of paleontological resources and/or unique geological features encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the qualified professional paleontologist.

GEO-3: **Cease Ground-Disturbing Activities and Implement Treatment Plan if Paleontological Resources Are Encountered.** If paleontological resources and or unique geological features are unearthed during ground-disturbing activities, ground-disturbing activities the paleontological monitor may halt or divert away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 50 feet must be established around the find where construction activities are not allowed to continue until appropriate paleontological treatment plan is approved by the Applicant and the City. Work is allowed to continue outside of the buffer area. The Applicant and City would coordinate with a professional paleontologist, who meets the qualifications set forth by the Society of Vertebrate Paleontology, to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource along with subsequent laboratory processing and analysis or preservation in place. At the paleontologist's discretion and to reduce construction delay, the grading and excavation contractor would assist in removing rock samples for initial processing.

GEO-4: **Prepare Report Upon Completion of Monitoring Services.** Upon completion of the above activities, the professional paleontologist would prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report would be submitted to the Applicant, the City, the Natural History Museums of Los Angeles County, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

NOI-1: **Reduce Potential Project Construction Noise Levels.** To reduce potential noise levels from project construction activities, the project proponent must:

1. *Notify Residential Land Uses of Planned Construction Activities.* This notice must be provided at least two weeks before the start of any construction activities, describe the noise control measures to be implemented by the project, and include the name and phone number of the designated contact for the project proponent and the City of Monterey Park responsible for handling construction-related noise complaints (per #5 below). This notice must be provided to the owner/occupants of residential dwelling units within 500 feet of construction work areas.

2. *Restricted Work Hours:* All construction-related work activities, including material deliveries, are subject to the requirements of MPMC Section 4.50.100. Construction activities, including deliveries, will occur only during the hours of 7 AM to 7 PM Monday to Friday and 9 AM to 6 PM on Saturday, Sunday, and holidays. The project proponent representative and/or its contractor must post a sign at all entrances to the construction site information contractors, subcontractors, other workers, etc. of this requirement.

3. *Construction Equipment Selection, Use, and Noise Control Measures*: The following measures apply to construction equipment used at the project site:

    a. Contractors must use the smallest size equipment capable of safely completing work activities.
    b. Construction staging will occur as far away from residential land uses as possible given site and active work constraints.

c. Electric hook-ups must be provided for stationary equipment (e.g., pumps, compressors, welding sets). If it is not feasible to provide an electric hook-up, the project proponent must ensure mitigation measures 3a and 3d are implemented.
d. All stationary noise generating equipment must be shielded and located as far as possible from residential land uses given site and active work constraints. Shielding may consist of existing vacant structures or a three-or four-sided enclosure provided the structure/enclosure breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operation.
e. Heavy equipment engines must be equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, and be maintained in accordance with manufacturer's recommendations during active construction activities.
f. Pneumatic tools must include a suppression device on the compressed air exhaust.
g. No radios or other amplified sound devices may be audible beyond the property line of the construction site.

4. *Implement Construction Activity Noise Control Measures:* The following measures apply to project construction activities:

    a. Demolition: Activities must be sequenced to take advantage of existing shielding/noise reduction provided by existing buildings or parts of buildings and methods that minimize noise and vibration, such as sawing concrete blocks, prohibiting on-site hydraulic breakers, crushing or other pulverization activities, must be employed during project construction.
    b. Demolition, Site Preparation, Grading, and Foundation Work: During all demolition, site preparation, grading, and structure foundation work activities, a physical noise barrier must be installed and maintained around the site perimeter to the maximum extent feasible given site constraints and access requirements. The noise barrier must extend to a height of eight feet above grade. Potential barrier options capable of reducing construction noise levels could include, without limitation:

        i. A concrete, wood, or other barrier installed at-grade (or mounted to structures located at-grade, such as a K-Rail), and consisting of a solid material (i.e., free of openings or gaps other than weep holes) that has a minimum rated transmission loss value of 20 dB.
        ii. Commercially available acoustic panels or other products such as acoustic barrier blankets that have a minimum sound transmission class (STC) or transmission loss value of 20 dB.
        iii. Any combination of noise barriers and commercial products capable of achieving required construction noise reductions during demolition, site preparation, grading, and structure foundation work activities.
        iv. The noise barrier may be removed following the completion of building foundation work (i.e., it is not necessary once framing and typical vertical building construction begins provided no other grading, foundation, etc. work is still occurring on-site).

5. *Prepare a Construction Noise Complaint Plan:* The project proponent must prepare a Construction Noise Complaint Plan that:

a. Identify the name and/or title and contact information (including phone number and email) for a designated project and City representative responsible for addressing construction-related noise issues.
b. Includes procedures describing how the designated project representative will receive, respond, and resolve construction noise complaints.
c. At a minimum, upon receipt of a noise complaint, the project representative must notify the City contact, identify the noise source generating the complaint, determine the cause of the complaint, and take steps to resolve the complaint.

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6 References

6.1 List of Preparers

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6.2 Persons and Organizations Consulted

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South Alhambra Avenue Multi-Family Condominium Project

Air Quality Impact Analysis Report

April 2023

CEQA Lead Agency:

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List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	**Full Phrase or Description**
§	Section
°C	Degrees Celsius
°F	Degrees Fahrenheit
µm	Micrometer
AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AMSL	Above Mean Sea Level
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
Basin	South Coast Air Basin
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Cal-EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
City	City of Monterey Park
CO	Carbon Monoxide
CP	Cancer Potency
CRB	Cancer Burden
DPM	Diesel Particulate Matter
GVWR	Gross Vehicle Weight Rating
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
LDA	Light Duty Auto
LDT1 / LDT2	Light Duty Trucks
m^3	Cubic Meter
MATES V	Multiple Air Toxics Exposure Study in the South Coast Air Basin
MPO	Metropolitan Planning Organization
MY	Model Year
NAAQS	National Ambient Air Quality Standards
NO	Nitric Oxide

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	**Full Phrase or Description**
NO_2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
PM	Particulate Matter
PM_{10}	Coarse Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
ppm	Parts Per Million
PRC	Public Resources Code
REL	Reference Exposure Level
Report	Air Quality Impact Analysis Report
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SO_4^{2-}	Sulfates
SO_x	Sulfates
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds

EXECUTIVE SUMMARY

This Air Quality Impact Analysis Report (Report) evaluates and documents the potential air quality impacts associated with the construction and operation of the proposed South Alhambra Avenue Multi-Family Condominium Project (proposed Project), a multi-family residential project located at 338-410 South Alhambra Avenue in the City of Monterey Park, California 91755.

This Report is consistent with the guidance and recommendations contained in the South Coast Air Quality Management District's (SCAQMD) California Environmental Quality Act (CEQA) Air Quality Handbook, as amended and supplemented. This Report is intended to assist the CEQA Lead Agency (City of Monterey Park) with its review of the proposed Project's potential air quality impacts in compliance with the State CEQA Statutes and Guidelines, particularly in respect to the air quality issues identified in Appendix G of the State CEQA Guidelines.

S.1 PROPOSED PROJECT DESCRIPTION

The proposed Project involves the construction and operation of a multi-family condominium project consisting of 65 residential units, located in one building on an approximately 1.73-acre site in the City of Monterey Park, California. The Project site is comprised of three parcels (APN# 5259-004-036, 5259-004-037, and 5259-004-038) classified and designated as High Density Residential by the City's Zoning Code and General Plan. The development would be used for multi-family residential housing. The Project would have four stories, including a partially underground parking garage. The proposed units would be in the three stories above the parking garage and would be arranged around a central courtyard. The Project would also include landscaping and surface parking. The Project site is currently occupied by 15 residential structures, 14 of which are habitable units.

S.2 POTENTIAL CONSTRUCTION AIR QUALITY IMPACTS

The proposed Project's construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version (V.) 2022.1.1.6. CalEEMod is a computer program recommended for use by the SCAQMD for use in preparing emission estimates for land use and development projects. The modeling indicates maximum daily emissions during construction activities would be below all applicable SCAQMD regional and local thresholds for regulated air pollutants; however, sensitive receptors are located north, south, east, and west of the Project site. The proposed Project would generate diesel particular matter (DPM), a toxic air contaminant (TAC), from combustion of diesel fuel in heavy-duty construction equipment and trucks used to access the site during construction. The Project would involve different construction activities occurring at different intensities over an approximately 19-month timeframe, with initial groundbreaking taking place potentially as early as July 2023. Receptors would be exposed to varying concentrations of pollutants throughout the construction period, but due to the proposed Project's close proximity to adjacent sensitive receptors, construction exhaust emissions of DPM could result in incremental cancerogenic health risk increases that are in excess of the SCAQMD's threshold of 10 excess cancers in a million. To reduce potential DPM exhaust emissions generated by Project construction activities, MIG recommends the proposed Project incorporate Mitigation Measure AIR-1, which requires the use of construction equipment that meets Tier IV emission standards (see Section S.6). The implementation of Mitigation Measure AIR-1 would reduce construction-related DPM emissions by approximately 51 percent and reduce the potential for substantial pollutant concentrations and adverse health risks to occur from construction-related DPM emissions to a less than significant level.

S.3 POTENTIAL OPERATIONAL AIR QUALITY IMPACTS

The proposed Project would generate criteria air pollutants from a variety of sources during operation, including area, energy, and mobile sources. The emissions from these sources were quantified using CalEEMod. The operational air quality impact analysis indicates the proposed Project would not generate criteria air pollutant or fugitive dust emissions that exceed the SCAQMD's recommended regional CEQA thresholds of significance.

S.4 CONSISTENCY WITH APPLICABLE PLANS

The proposed Project would not result in population or employment growth or associated emissions that conflict with the SCAQMD's 2022 Air Quality Management Plan.

S.5 ODORS

The proposed Project would involve construction and operational activities that could generate odors typical of many construction and residential land use operations. These types of odors (e.g., exhaust) are typical of the area and would be quick to disperse. The proposed Project would not result in the creation of objectionable odors that would affect a substantial number of people.

S.6 MITIGATION MEASURES

MIG recommends the proposed Project incorporate the following mitigation measure to ensure Project construction does not generate TAC emissions that have the potential to result in substantial adverse health effects at sensitive receptors located near the Project:

Mitigation Measure AIR-1: Reduce DPM Emissions. To reduce potential short-term adverse health risks associated with PM_{10} exhaust emissions, including emissions of diesel particulate matter (DPM), generated during project construction activities, the Applicant and/or it's designated contractors, contractor's representatives, or other appropriate personnel to shall implement the following construction equipment restrictions for the Project:

1. To the extent feasible, contractors shall use the smallest size equipment capable of safely completing work activities.
2. Electric hook-ups shall be provided for stationary equipment (e.g., pumps, compressors, welding sets).
3. The use of portable diesel generators shall be prohibited at the Project site.
4. All construction equipment with a rated power-output of 50 horsepower or greater shall meet U.S. EPA and CARB Tier IV Final Emission Standards for PM_{10}. This may be achieved via the use of equipment with engines that have been certified to meet Tier IV emission standards, or through the use of equipment that has been retrofitted with a CARB-verified diesel emission control strategy (e.g., particulate filter) capable of reducing exhaust PM_{10} emissions to levels that meet Tier IV standards.

As an alternatively to using equipment that meets Tier IV Final Emissions Standards for off-road equipment with a rated power-output of 50 horsepower or greater, the Applicant may prepare and submit a refined construction health risk assessment to the City once additional Project-specific construction information is known (e.g., specific construction equipment type, quantity, engine tier, and runtime by phase). The refined health risk assessment shall demonstrate and identify any measures necessary such that the proposed Project's incremental cancerogenic health risk at nearby sensitive receptor locations is below the applicable SCAQMD threshold of 10 cancers in a million.

1 INTRODUCTION

The Commons of MPK LLC proposes to develop a multi-family condominium residential project at 338-410 South Alhambra Avenue, Monterey Park, California (proposed Project). The Project would be located across three parcels in the eastern part of the City of Monterey Park in Los Angeles County. It would involve the demolition of 14 units of multi-family residential housing, one unit of single-family residential housing, and the construction and operation of a 65-unit multi-family condominium facility.

MIG, Inc. (MIG) has prepared this Air Quality Impact Analysis Report (Report) to evaluate the potential construction- and operational-related air quality impacts of the proposed Project. MIG has prepared this report using Project-specific information contained in South Alhambra Avenue Multi-Family Condominium Project's entitlement applications, as well as supplemental information provided by The Commons of MPK, LLC. Where necessary, MIG has supplemented available information with standardized sources of information, such as model assumptions pertaining to construction equipment activity levels. In general, this Report evaluates the potential "worst-case" conditions associated with the proposed Project's construction and operational emissions levels to ensure a conservative (i.e., likely to overestimate) assessment of potential air quality impacts is presented.

This Report is intended for use by the City of Monterey Park to assess the potential air quality impacts of the proposed Project in compliance with the California Environmental Quality Act (CEQA; PRC §21000 et seq.) and the State CEQA Guidelines (14 CCR §15000 et seq.), particularly with respect to the air quality issues identified in Appendix G of the State CEQA Guidelines.

1.1 REPORT ORGANIZATION

This Report is organized as follows:

- **Chapter 1, Introduction,** explains the contents of this Report and its intended use.
- **Chapter 2, Proposed Project Description**, provides an overview of the construction and operational activities associated with the proposed Project.
- **Chapter 3, Air Quality Setting and Regulatory Framework,** provides pertinent background information on air quality, describes the existing air quality setting of the proposed Project, and provides information on the federal, state, and local regulations that govern the proposed Project's air quality setting and potential air quality impacts.
- **Chapter 4, Air Quality Impact Assessment,** identifies the potential construction and operational air quality impacts of the proposed Project and evaluates these effects in accordance with Appendix G of the State CEQA Guidelines.
- **Chapter 5, Report Preparers and References,** list the individuals involved, and the references used, in the preparation of this Report.

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2 PROPOSED PROJECT DESCRIPTION

The Commons of MPK LLC is proposing to develop the South Alhambra Avenue Multi-Family Condominium Project, a 65-unit multi-family condominium Project, on existing residential land in the eastern part of the City of Monterey Park.

2.1 PROJECT LOCATION

The proposed Project would be located at 338-410 South Alhambra Avenue in the City of Monterey Park (Assessor Parcel Numbers (APN) 5259-004-036, 5259-004-037, and 5259-004-038; see Figure 2-1). The Project site consists of approximately 1.73-acres of land currently developed with multi-family residential housing facilities and a single-family house. The site is classified and designated as High Density Residential by the City's Zoning Code and General Plan (City of Monterey Park 2021; City of Monterey Park, 2020).

2.1.1 SURROUNDING LAND USES

The proposed Project site is surrounded by residential land uses. The site is bound on the north by single-family residential uses, on the east and south by multi-family residential uses, and on the west by South Alhambra Avenue and single-family residential uses. The surrounding land uses to the north, east, and south are classified by the City's Zoning Code as High Density Residential (R-3) and the surrounding land uses to the west are classified as Medium-Multiple Residential (R-2). Interstate 10 (I-10) is located approximately 0.90 miles to the north. There are no schools or parks within 1,000 feet of the Project site.

2.2 EXISTING SITE DESCRIPTION AND OPERATIONS

The proposed Project site has historically been used for residential uses. Currently, the site contains a total of 15 residential structures/14 habitable units, consisting of 14 multi-family residential units and one single-family residential unit. At 338A and 338B South Alhambra Avenue, there are two one-story residential units with garages totaling 1,516 square feet. At 400 and 408 South Alhambra Ave there are 12 multi-family units totaling 9,976 square feet, and at 410 South Alhambra Ave there is a single-family residential unit that is 1,600 square feet in size.

2.3 PROPOSED SITE DEVELOPMENT AND OPERATIONS

The proposed Project would construct one building containing 65 multi-family residential units. The building would have partial subterranean parking and would be oriented around a central courtyard. It would have three above grade stories and reach a height of 45 feet above finished floor at the northwestern portion of the site. The building footprint would be approximately 34,551 square feet, and the total building floor area for all three stories would be 148,578 square feet.

Figure 2-1 Aerial View of the Project Site

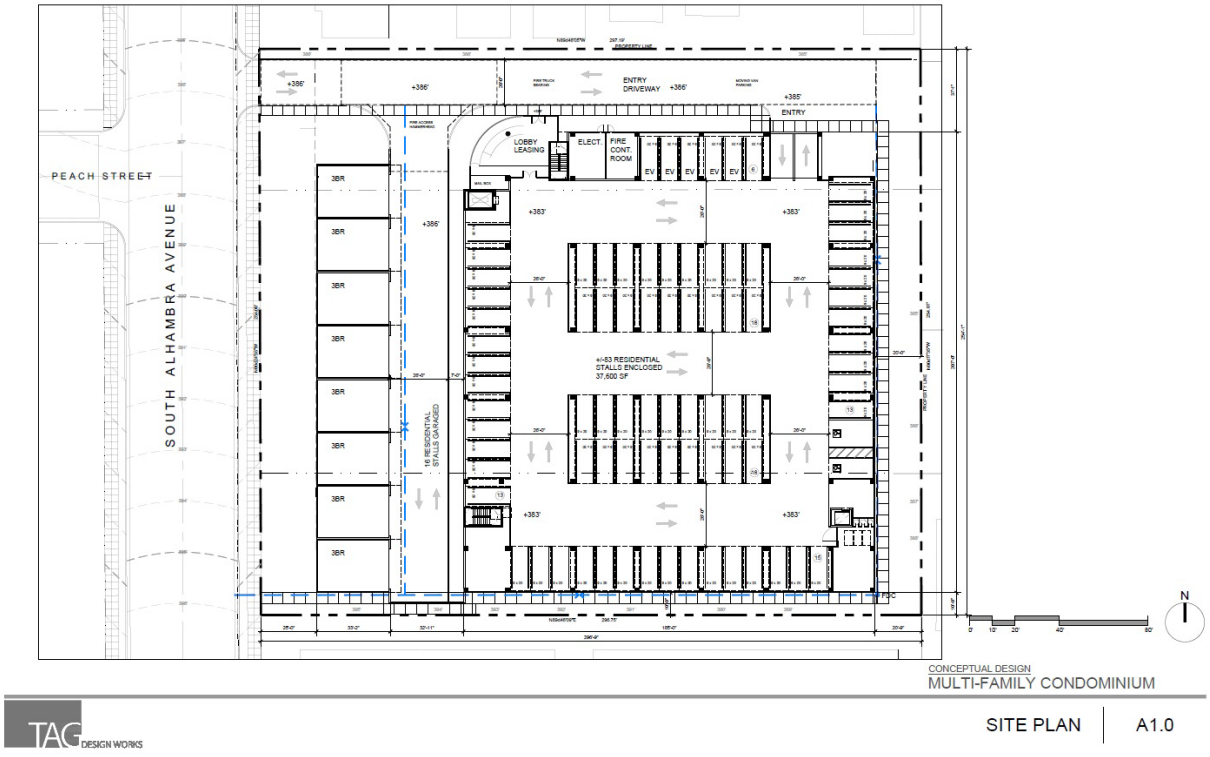
2.3.1 SITE LAYOUT

The proposed building would be setback a minimum of approximately 37 feet from the property line to the north, approximately 10 feet to the south, approximately 25 feet to the west, and approximately 20 feet to the east. There would be an approximately 10,374 square foot courtyard of ground floor open space that would be located near the center of the property and would be surrounded by the multi-family units.

2.3.2 NEW RESIDENTIAL BUILDING DESCRIPTIONS

As discussed above, the Project will include one building containing 65 multi-family residential housing, 7 of which would be low-income units. The building's first level would consist of the partially buried, 45,067 square foot subterranean parking garage and an 890 square foot lobby. Levels two, three, and four would be approximately 34,551 square feet, each for residential use. The units across levels two, three, and four would include 15 one-bedroom units (645 square feet each), 33 two-bedroom units (1,000 square feet each), 9 three-bedroom units (1,300 square feet each), and 8 three-bedroom townhouses (2,100 square feet each) which would total 71,175 square feet for residential units. The entire building, including the parking garage and lobby, would total 148,578 square feet. There would be approximately 13,700 square feet of landscaped common open space, which would include an approximately 10,374 square foot soft ground courtyard. The building would have a total height of 45 feet, with 34 feet above street level and 11 feet below street level since Level 1, the parking garage, would be partially underground. The Project site plan is shown in Figure 2-2.

Figure 2-2: Site Plan



Source: TAG Design Works, 2023.

2.3.3 PARKING AND SITE ACCESS

The Project would have one driveway to South Alhambra Avenue, which borders the site to the northwest. On-site parking would be provided through a partial subterranean parking structure and surface parking. Residential parking would be located on Level 1 and would have 99 parking spaces.

2.3.4 OTHER SITE IMPROVEMENTS

The proposed Project would connect to the existing water and sewer lines located under South Alhambra Avenue that is provided by the City of Monterey Park via the San Gabriel Valley Water Company.

2.3.5 OPERATIONAL TRIP GENERATION ESTIMATES

Once operational, the proposed Project would generate trips to and from the site. The proposed Project's trip generation potential, as provided for in the Project's Transportation Study Screening Analysis prepared by Ganddini Group, is summarized in Table 2-1 (Ganddini 2023). The Project is expected to result in approximately 308 net new daily trips compared to existing uses on the Project site.

Table 2-1: Net Project Trip Generation

Land Use	AM Peak Hour Volumes	PM Peak Hour Volumes	Average Daily Traffic (ADT)
Proposed Project	26	33	438
Existing Land Uses to be Displaced	6	8	107
Total	20	25	331

Source: Ganddini Group 2023, modified by MIG.

2.4 PROJECT CONSTRUCTION

The proposed Project would involve the demolition of the existing 14 multi-family units and one single-family unit, and the construction of the 65-unit multi-family residential building. Construction phasing associated with the proposed Project is anticipated to include demolition, site preparation, grading, trenching, building construction (foundation), building construction (vertical), paving, and architectural coating. The Project will require the excavation of approximately 9,000 cubic yards of soil to construct the subterranean garage. Construction activities are anticipated to begin in mid-2023 and last approximately 19 months. The proposed Project is anticipated to require varying types of equipment during construction including, but not limited to: bulldozers, backhoes, loaders, graders, cranes and forklifts. Table 2-2 summarizes the proposed Project's construction phasing and the typical pieces of heavy-duty, off-road construction equipment that would be required during each phase.

Table 2-2: Construction Activity, Duration, and Typical Equipment		
Construction Activity	**Duration (Days)(A)**	**Typical Equipment Used(B)**
Demolition	10	Concrete/Industrial Saw, Dozer, Backhoe
Site Preparation	5	Grader, Scraper, Backhoe
Grading	20	Excavator, Grader, Dozer, Backhoe
Trenching	10	Trencher
Building Construction (Foundation)	30	Crane, Forklift, Generator, Backhoe, Welder
Building Construction (Vertical)	360	Crane, Forklift, Generator, Backhoe, Welder
Paving	10	Pavers, Paving Equipment, Rollers, Backhoe
Architectural Coating	10	Air Compressors

Source: MIG, 2023 (See Appendix A).

(A) Days refers to total active workdays in the construction phase, not calendar days.

(B) The typical equipment list does not reflect all equipment that would be used during the construction phase. Not all equipment would operate eight hours per day each workday.

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3 AIR QUALITY SETTING AND REGULATORY FRAMEWORK

This chapter provides information on the environmental and regulatory air quality setting of the proposed Project. Information on existing air quality conditions, federal and state ambient air quality standards, and pollutants of concern was obtained from the U.S. Environmental Protection Agency (U.S. EPA), CARB, and SCAQMD.

3.1 REGIONAL ENVIRONMENTAL SETTING

Air quality is a function of pollutant emissions and topographic and meteorological influences. The amount of pollutants emitted into the air and the physical features and atmospheric conditions of a geographic region interact to affect the movement and dispersion of pollutants and determine the quality of its air.

The U.S. EPA and CARB are the federal and state agencies charged with maintaining air quality in the nation and state, respectively. The U.S. EPA delegates much of its authority over air quality to CARB. CARB has geographically divided the state into 15 air basins for the purposes of managing air quality on a regional basis. An air basin is a CARB-designated management unit with similar meteorological and geographic conditions. The proposed Project is located in the City of Monterey Park, in Los Angeles County, within the South Coast Air Basin (Basin). The Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties.

3.1.1 REGULATED AIR POLLUTANTS

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six common air pollutants: ozone (O_3), particulate matter (PM), which consists of "inhalable coarse" PM (particles with an aerodynamic diameter between 2.5 and 10 microns in diameter, or PM_{10}) and "fine" PM (particles with an aerodynamic diameter smaller than 2.5 microns, or $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. The U.S. EPA refers to these six common pollutants as "criteria" pollutants because the agency regulates the pollutants on the basis of human health and/or environmentally-based criteria. CARB has established California Ambient Air Quality Standards (CAAQS) for the six common air pollutants regulated by the federal Clean Air Act (the CAAQS are more stringent than the NAAQS) plus the following additional air pollutants: hydrogen sulfide (H_2S), sulfates (SO_X), vinyl chloride, and visibility reducing particles. A description of the regulated air pollutants associated with the proposed Project is provided below.

- **Ground-level ozone**, or smog, is not emitted directly into the atmosphere. It is created from chemical reactions between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs), also called reactive organic gases (ROG), in the presence of sunlight (U.S. EPA, 2022a). Thus, ozone formation is typically highest on hot sunny days in urban areas with NO_X and ROG pollution. Ozone irritates the nose, throat, and air pathways and can cause or aggravate shortness of breath, coughing, asthma attacks, and lung diseases such as emphysema and bronchitis.
    - **ROG** is a CARB term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and includes several low-reactive organic compounds which have been exempted by the U.S. EPA (CARB, 2004).
    - **VOC** is a U.S. EPA term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate,

which participates in atmospheric photochemical reactions. The term exempts organic compounds of carbon which have been determined to have negligible photochemical reactivity such as methane, ethane, and methylene chloride (CARB, 2004).

- **Particulate matter (PM)**, also known as particle pollution, is a mixture of extremely small solid and liquid particles made up of a variety of components such as organic chemicals, metals, and soil and dust particles (U.S. EPA, 2022b).
  - PM_{10}, also known as inhalable coarse, respirable, or suspended PM_{10}, consists of particles less than or equal to 10 micrometers in diameter (approximately 1/7th the thickness of a human hair). These particles can be inhaled deep into the lungs and possibly enter the blood stream, causing health effects that include, but are not limited to, increased respiratory symptoms (e.g., irritation, coughing), decreased lung capacity, aggravated asthma, irregular heartbeats, heart attacks, and premature death in people with heart or lung disease (U.S. EPA, 2022b).
  - $PM_{2.5}$, also known as fine PM, consists of particles less than or equal to 2.5 micrometers in diameter (approximately 1/30th the thickness of a human hair). These particles pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects (U.S. EPA, 2022b).
- **Carbon Monoxide (CO)** is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicles are the single largest source of carbon monoxide in the Basin. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can aggravate cardiovascular disease and cause headaches, dizziness, unconsciousness, and even death (U.S. EPA, 2022c).
- **Nitrogen Dioxide (NO_2)** is a by-product of combustion. NO_2 is not directly emitted but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to ozone formation. NO_2 also contributes to the formation of particulate matter. NO_2 can cause breathing difficulties at high concentrations (U.S. EPA, 2022d).
- **Sulfur Dioxide (SO_2)** is one of a group of highly reactive gases known as oxides of sulfur (SO_X). Fossil fuel combustion in power plants and industrial facilities are the largest emitters of SO_2. Short-term effects of SO_2 exposure can include adverse respiratory effects such as asthma symptoms. SO_2 and other SO_X can react to form PM (U.S. EPA, 2022e).
- **Sulfates (SO_4^{2-})** are the fully oxidized ionic form of sulfur. SO_4^{2-} are primarily produced from fuel combustion. Sulfur compounds in the fuel are oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Sulfate exposure can increase risks of respiratory disease (CARB,2022e).

In addition to criteria air pollutants, the U.S. EPA and CARB have classified certain pollutants as hazardous air pollutants (HAPs) or toxic air contaminants (TACs), respectively. These pollutants can cause severe health effects at very low concentrations, and many are suspected or confirmed carcinogens. The U.S. EPA has identified 187 HAPs, including such substances as arsenic and chlorine; CARB considers all U.S. EPA designated HAPs, as well as particulate emissions from diesel-fueled engines (DPM) and other substances, to be a TAC. Since CARB's list of TACs references and includes U.S. EPA's list of HAPs, this document uses the term TAC when referring to HAPs and TACs. A description of the TACs associated with the proposed Project and its vicinity is provided below.

- **Gasoline-Powered Mobile Sources.** According to the SCAQMD's *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (SCAQMD, 2021a), or MATES V, gasoline-

powered vehicles emit TACs, such as benzene, which can have adverse health risks. Gasoline-powered sources emit TACs in much smaller amounts than diesel-powered vehicles. The MATES V study identifies that diesel emissions account for approximately 50% of the total air toxics and cancer risk in the Basin, while Benzene, 1,3-Butadiene, and Carbonyls make up approximately 25% of the cancer risk.

- **Diesel Particulate Matter (DPM).** Diesel engines emit both gaseous and solid material; the solid material is known as DPM. Almost all DPM is less than 1 micrometer (μm) in diameter, and thus is a subset of $PM_{2.5}$. DPM is typically composed of carbon particles and numerous organic compounds. Diesel exhaust also contains gaseous pollutants, including VOCs and NO_x. The primary sources of diesel emissions are ships, trains, trucks, rail yards and heavily traveled roadways. These sources are often located near highly populated areas, resulting in greater DPM related health consequences in urban areas. The majority of DPM is small enough to be inhaled into the lungs and what particles are not exhaled can be deposited on the lung surface and in the deepest regions of the lungs where the lung is most susceptible to injury. In 1998, CARB identified DPM as a toxic air contaminant based on evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure (CARB 2016).

Common criteria air pollutants, such as ozone precursors, SO_2, and PM, are emitted by a large number of sources and have effects on a regional basis (i.e., throughout the Basin); other pollutants, such as HAPs, TACs, and fugitive dust, are generally not as prevalent and/or emitted by fewer and more specific sources. As such, these pollutants have much greater effects on local air quality conditions and local receptors.

3.1.2 REGIONAL AIR POLLUTANT EMISSIONS LEVELS

CARB's estimate of the amount of emissions generated within the Basin in 2012, the most recent year for which data is available, is summarized in Table 3-1.

3.1.3 SOUTH COAST AIR BASIN CLIMATE, TOPOGRAPHY, AND METEOROLOGY

Los Angeles County and the broader Los Angeles Basin are defined by a semi-arid, Mediterranean climate with mild winters and warm summers. The San Gabriel, San Bernardino, and San Jacinto Mountains bound the Basin to the north and east trap ambient air and pollutants within the Los Angeles and Inland Empire valleys below. The climate of the Los Angeles region is classified as Mediterranean, but weather conditions within the basin are dependent on local topography and proximity to the Pacific Ocean. The climate is dominated by the Pacific high-pressure system that results in generally mild, dry summers and mild, wet winters. This temperate climate is occasionally interrupted by extremely hot temperatures during the summer, Santa Ana winds during the fall, and storms from the Pacific northwest during the winter. In addition to the basin's topography and geographic location, El Niño and La Niña patterns also have large effects on weather and rainfall received between November and March.

Table 3-1: South Coast Air Basin Emissions Summary							
Emissions Source	**2017 Pollutant Emissions (Tons Per Day)**						
	ROG	**ROG**	**ROG**	**ROG**	**ROG**	**ROG**	**ROG**
Stationary(A)	87	87	87	87	87	87	87
Area-wide(B)	130	130	130	130	130	130	130
Mobile(C)	185	185	185	185	185	185	185
Total(D)	529	529	529	529	529	529	529
Emissions Source	**2017 Pollutant Emissions (Tons Per Year)**						
	ROG	**ROG**	**ROG**	**ROG**	**ROG**	**ROG**	**ROG**
Stationary (A)	31,675	31,675	31,675	31,675	31,675	31,675	31,675
Area-wide (B)	47,395	47,395	47,395	47,395	47,395	47,395	47,395
Mobile (C)	67,598	67,598	67,598	67,598	67,598	67,598	67,598
Total (D)	193,300	193,300	193,300	193,300	193,300	193,300	193,300

Source: CARB, 2022b, modified by MIG.

(A) Stationary sources include fuel combustion in stationary equipment or a specific type of facility such as printing and metals processing facilities.

(B) Mobile sources include automobiles, trucks, and other vehicles intended for "on-road" travel and other self-propelled machines such as construction equipment and all-terrain vehicles intended for "off-road" travel.

(C) Area-wide sources include solvent evaporation (e.g., consumer products, painting, and asphalt paving) and miscellaneous processes such as residential space heating, fugitive windblown dust, and cooking.

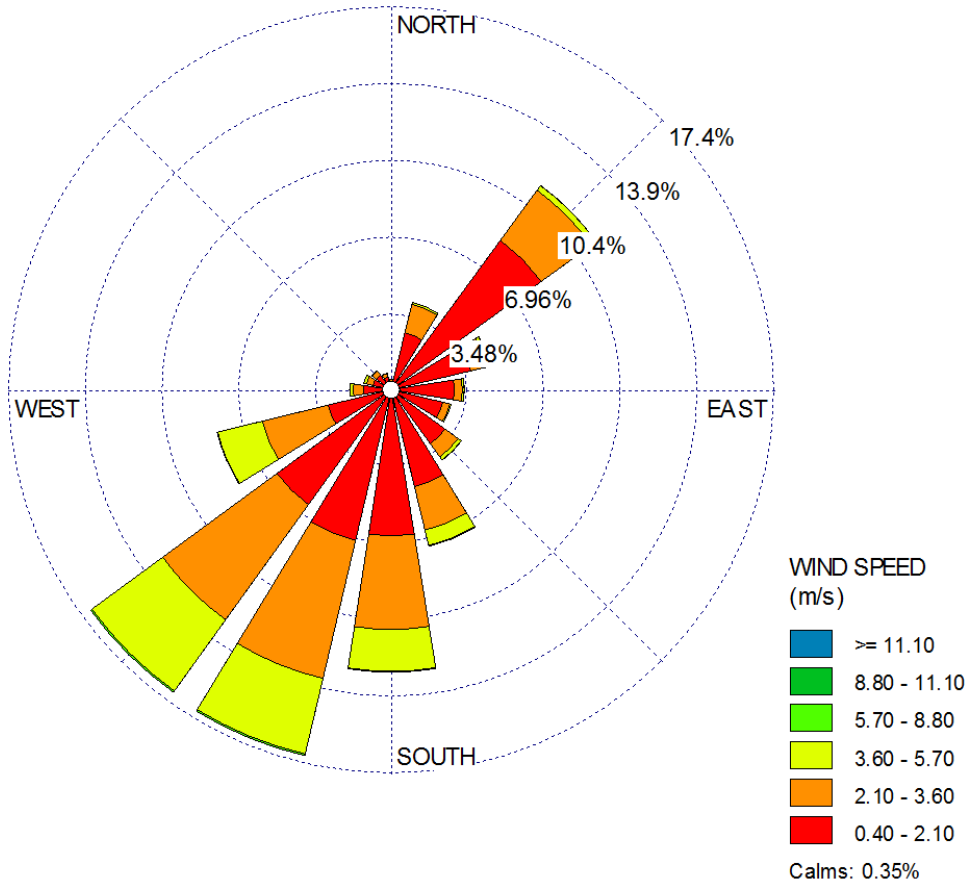
(D) Totals may not equal due to rounding.

The Pacific high-pressure system drives the prevailing winds in the basin. The winds tend to blow onshore in the daytime and offshore at night. In the summer, an inversion layer is created over the coastal areas and increases ozone levels. A temperature inversion is created when a layer of cool air is overlain by a layer of warmer air; this can occur over coastal areas when cool, dense air that originates over the ocean is blown onto land and flows underneath the warmer, drier air that is present over land. In the winter, areas throughout the basin often experience a shallow inversion layer that prevents the dispersion of surface level air pollutants, resulting in higher concentrations of criteria air pollutants such as carbon monoxide (CO) and oxides of nitrogen (NO_X).

Located in the western Gabriel Valley region of Los Angeles County, the City of Monterey Park consists of approximately eight square miles. It is situated adjacent to the cities/communities of Arcadia, Alhambra, Rosemead, City Terrace, Montebello, and South San Gabriel. The region experiences a Mediterranean climate characterized by hot, dry summers and cool, mild winters, with precipitation occurring in the winter months. The City is within the Climatic Transition Zone from the moister coastal region to the more arid inland regions of Southern California.

SCAQMD maintains publicly meteorological data for use in air quality analyses. The closest meteorological station is the Pico Rivera meteorological station, approximately 4.3 miles to southeast of the Project site at 4144 San Gabriel River Parkway in the City of Pico Rivera. The wind rose for the Pico Rivera meteorological station, shown in Figure 3-1, indicates the prevailing wind near the Project site is from the southwest.

Figure 3-1 Wind Rose for the Pico Rivera (PICO) Meteorological Station (Blowing From)



Source: SCAQMD, 2018a

3.1.4 REGIONAL AIR QUALITY CONDITIONS AND ATTAINMENT STATUS

As described in Section 3.1.1, the Federal and State governments have established emission standards and limits for air pollutants which may reasonably be anticipated to endanger public health or welfare. These standards typically take one of two forms: standards or requirements that are applicable to specific types of facilities or equipment (e.g., petroleum refining, metal smelting), or concentration-based standards that are applicable to overall ambient air quality. Air quality conditions are best described and understood in the context of these standards; areas that meet, or attain, concentration-based ambient air quality standards are considered to have levels of pollutants in the ambient air that, based on the latest scientific knowledge, do not endanger public health or welfare.

The U.S. EPA, CARB, and the SCAQMD assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories:

- **Attainment.** A region is "in attainment" if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a "maintenance area" for 10 years to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- **Unclassified.** An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 3-2 summarizes the Basin's attainment status for criteria pollutants. The Basin is currently in nonattainment for state and federal ozone, state PM_{10}, and state and federal $PM_{2.5}$ standards. In September 2021, SCAQMD submitted a request to the EPA to redesignate the South Coast Air Basin from its current designation of serious nonattainment for the 2006 24-hour average PM2.5 NAAQS and moderate nonattainment for the 1997 24-hour average PM2.5 NAAQS to a designation of attainment for both PM2.5 standards.

Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial use. Pollutants in the Basin are blown inward from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

3.1.5 LOCAL AIR QUALITY CONDITIONS

Air pollution levels are measured at monitoring stations located throughout the Basin. The Project site is located in SCAQMD Source Receptor Area (SRA) 11 – South San Gabriel Valley. The closest air quality monitoring station is identified as South San Gabriel Valley Station (Station #085) by SCAQMD (CARB refers to this station as Pico Rivera #2). The station is located approximately 4.3 miles southeast of the Project site and monitors CO, O_3, NO_2, Pb, and $PM_{2.5}$. PM_{10} is monitored by an air monitoring station in SCAQMD Source Receptor Area (SRA) 9 which is identified as East San Gabriel Valley 1 Station (Station #060) by SCAQMD (CARB refers to this station as Azusa). It is located approximately 12.25 miles northeast of the Project site at 803 North Loren Avenue in the city of Azuza. These two monitoring stations approximate the air quality conditions within the City.

Table 3-3 summarizes the published CO, O_3, NO_2, Pb, and $PM_{2.5}$ monitoring data from the South San Gabriel Valley station and the PM_{10} monitoring data from the East San Gabriel 1 station 2018 to 2020, the three most recent years for which verified, published data was available from the SCAQMD at the time this Report was prepared.

Table 3-2: Summary of Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time[B]	California Standards[A]		National Standards[A]	
		Standard[C]	Attainment Status[D]	Standard[C]	Attainment Status[D]
Ozone	1-Hour (1979)	--	--	240 µg/m^3	Nonattainment
	1-Hour (Current)	180 µg/m^3	Nonattainment	--	--
	8-Hour (1997)	--	--	160 µg/m^3	Nonattainment
	8-Hour (2008)	--	--	147 µg/m^3	Nonattainment
	8-Hour (Current)	137 µg/m^3	Nonattainment	137 µg/m^3	Nonattainment
PM_{10}	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Attainment
	Annual Average	20 µg/m^3	Nonattainment	--	--
$PM_{2.5}$	24-Hour	--	--	35 µg/m^3	Nonattainment
	Annual Average (1997)	--	--	15 µg/m^3	Attainment
	Annual Average (Current)	12 µg/m^3	Nonattainment	12 µg/m^3	Nonattainment
Carbon Monoxide	1-Hour	23,000 µg/m^3	Attainment	40,000 µg/m^3	Attainment
	8-Hour	10,000 µg/m^3	Attainment	10,000 µg/m^3	Attainment
Nitrogen Dioxide	1-Hour	339 µg/m^3	Attainment	188 µg/m^3	Unclassifiable/ Attainment
	Annual Average	57 µg/m^3	Attainment	100 µg/m^3	Attainment
Sulfur Dioxide	1-Hour	655 µg/m^3	Attainment	196 µg/m^3	Attainment
	24-Hour	105 µg/m^3	--	367 µg/m^3	Unclassifiable/ Attainment
	Annual Average	--	--	79 µg/m^3	Unclassifiable/ Attainment
Lead	3-Months Rolling	--	--	0.15 µg/m^3	Nonattainment (Partial)
Hydrogen Sulfide	1-Hour	42 µg/m^3	Attainment	--	
Sulfates	24-Hour	25 µg/m^3	Attainment	--	
Vinyl Chloride	24-Hour	26 µg/m^3	Attainment	--	

Source: SCAQMD 2018b, modified by MIG.

(B) This table summarizes the CAAQS and NAAQS and the Basin's attainments status. This table does not prevent comprehensive information regarding the CAAQS and NAAQS. Each CAAQS and NAAQS has its own averaging time, standard unit of measurement, measurement method, and statistical test for determining if a specific standard has been exceeded. Standards are not presented for visibility reducing particles, which are not concentration-based. The Basin is unclassified for visibility reducing particles.

(C) Ambient air standards have changed over time. This table presents information on the standards previously used by the U.S. EPA for which the Basin does not meet attainment.

(D) All standards are shown in terms of micrograms per cubic meter (µg/m^3) rounded to the nearest whole number for comparison purposes (with the exception of lead, which has a standard less than 1 µg/m^3). The actual CAAQS and NAAQS standards specify units for each pollutant measurement.

(E) A= Attainment, N= Nonattainment, U=Unclassifiable.

Table 3-3: 2018-2020 Local Air Quality Data for South San Gabriel Valley and East San Gabriel 1				
Pollutant	**Ambient Air Standard**	**Year**		
		2018	**2019**	**2020**
Ozone (O_3)				
Maximum 1-hour Concentration (ppm)		0.115	0.108	0.169
Maximum 8-hr Concentration (ppm)		0.082	0.091	0.114
Number of Days Exceeding State 1-hr Standard	>0.09ppm	3	5	20
Number of Days Exceeding State 8-hr Standard	>0.070ppm	5	7	23
Days Exceeding Federal 1-hr Standard	>0.124 ppm	0	0	3
Days Exceeding Federal 8-hr Standard	>0.070 ppm	5	7	23
Carbon Monoxide (CO)				
Maximum 1-hr Concentration (ppm)		2.0	1.9	3.1
Maximum 8-hr Concentration (ppm)		1.8	1.5	1.7
Days Exceeding State 1-hr Standard	>20ppm	0	0	0
Days Exceeding Federal/State 8-hr Standard	>9ppm	0	0	0
Days Exceeding Federal 1-hr Standard	>35ppm	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hr Concentration (ppb)		76.8	61.8	69.2
Annual Arithmetic Mean Concentration (ppb)		18.3	17.6	17.8
Days Exceeding State 1-hr Standard	>0.18ppm	0	0	0
Suspended Particulate Matter (PM_{10}) (A)				
Maximum 24-hr Concentration (µg/m^3)		78	82	95
Annual Arithmetic Mean (µg/m^3)		32.2	28.1	37.7
Samples Exceeding State 24-hr Standard	>50 µg/m^3	10	4	8
Samples Exceeding Federal 24-hr Standard	>150 µg/m^3	0	0	0
Fine Particulate Matter ($PM_{2.5}$)				
Maximum 24-hr Concentration (µg/m^3)		35.40	29.60	35.40
Annual Arithmetic Mean (µg/m^3)		12.31	10.34	13.22
Samples Exceeding Federal 24-hr Standard	>35 µg/m^3	0	0	0

Source: SCAQMD, 2020a, 2020b, 2020c

(A) Data from East San Gabriel 1 monitoring site

Table 3-3 shows that air quality standards at the monitoring station in South San Gabriel Valley have been exceeded for O_3 and that standards at the monitoring station in East San Gabriel have been exceeded for PM_{10}.As shown in Table 3-3:

- The maximum 1- and 8-hour CO concentration fluctuated during the 2018 to 2020 period, and there were no days in which CO standards were exceeded during this period.
- The maximum 1-hour NO_2 concentration and average annual NO_2 fluctuated during the 2018 to 2020 period. There were no days in which NO_2 standards were exceeded during this period.
- The maximum 1-hour and 8-hour O_3 concentration, as well as the number of days exceeding O_3 standards, generally increased from 2018 to 2020.

- The maximum 24-hour PM_{10} concentration increased from 2018 to 2020 and the average annual PM_{10} fluctuated during the 2018-2020 period. The State PM_{10} annual standard was exceeded in 2018, 2019, and 2020. The Federal PM_{10} annual standard was not exceeded during the 2018-2020 period.
- The maximum 24-hour and average annual $PM_{2.5}$ concentration fluctuated during the 2018 to 2020 period, and there were no days in which the Federal $PM_{2.5}$ 24-hour standard was exceeded during this period.

3.1.6 LOCAL AIR QUALITY SETTING

The proposed Project is located in the eastern portion of the City of Monterey Park and is bound on the north by single-family and then multi-family residential uses, on the east and south by multi-family residential uses, and on the west by South Alhambra Avenue, followed by single-family residential uses. I-10 is located approximately 0.90 miles to the north, State Route (SR) 60 is located approximately 1.7 miles to the south, and I-710 is located approximately 2.8 miles to the west. There are no schools or parks within 1,000 feet of the Project site. The vehicles on local roadways, such as South Alhambra Avenue which borders the Project site, contributes to the local air quality conditions in proximity to the Project site. The Project site currently contains single-family and multi-family residential units, which generate on- and off-site emissions from the operation of buildings and vehicles.

3.1.7 SENSITIVE AIR QUALITY RECEPTORS AND EXISTING REGIONAL HEALTH RISKS

Some people are more affected by air pollution than others. Sensitive air quality receptors include specific subsets of the general population that are susceptible to poor air quality and the potential adverse health effects associated with poor air quality. Both CARB and the SCAQMD consider residences, schools, parks and playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes to be sensitive air quality land uses and receptors (CARB, 2005; SCAQMD, 2017a). The Project site is in a residential neighborhood surrounded by residences, so there are potential sensitive air quality receptors within 1,000 feet of the Project site to the north, south, east, and west. This includes residences with shared property lines to the north, south, and east. These potential sensitive air receptors are shown in Figure 2-1.

The existing sensitive air quality receptors located adjacent or in close proximity to the Project site are exposed to air pollution associated with motor vehicles travelling on the roadways in proximity of the site (e.g., East Newmark Avenue to the north, South Alhambra Avenue to the west, Graves Avenue to the south, South Sefton Avenue to the east). According to the SCAQMD's MATES V Carcinogenic Risk Map, the existing carcinogenic risk in the vicinity of the Project is approximately 549 incremental cancer cases per million population (SCAQMD, 2021b)[1]. This estimate reflects regional modeling efforts that largely do not account for site specific emission rates and dispersion characteristics that typically result in refined and substantially lower health risk estimates.

[1] The potential cancer risk for a given substance is expressed as the incremental number of potential cancer cases that could be developed per million people, assuming that the population is exposed to the substance at a constant annual average concentration over a presumed 70-year lifetime. These risks are usually presented in chances per million. For example, if the cancer risks were estimated to be 100 per million, the probability of an individual developing cancer due to a lifetime of exposure would be one hundred in a million, or one in ten thousand. In other words, this predicts an additional 100 cases of cancer in a population of a million people over a 70-year lifetime (SCAQMD, 2021).

CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. The tool uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. The scores are then mapped so that different communities can be compared. An area with a high score is one that experiences a much higher pollution burden than areas with low scores.

According to the Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen 4.0 Map, the proposed Project is in Census Tract: 6037482202. This area shows an average pollution indicator percentile of 49% based on the CalEnviroScreen indicators (e.g., exposure, environmental effects, population characteristics, socioeconomic factors) and has a population of 5,087 people (OEHHA, 2023a). The CalEnviroScreen data indicates approximately 12 in 10,000 people in the Project site's census tract visited an emergency facility for asthma-related health issues. This rate places the Project site's census tract in the 12th percentile, meaning the asthma rate in this census tract is higher than 12% of the census tracts in the State (OEHHA 2021). Since the Project area's census tract is not in the top 25% in scoring according to the CalEnviroScreen methodology, it is not considered a disadvantaged community pursuant to Senate Bill (SB) 535, which allocates funding from the state's Cap and Trade Program to disadvantaged communities (OEHHA, 2023b).

3.2 FEDERAL, STATE, AND LOCAL AIR QUALITY REGULATIONS

3.2.1 FEDERAL AIR QUALITY REGULATIONS

3.2.1.1 Clean Air Act

The Federal Clean Air Act (CAA) defines the U.S. EPA's responsibilities for protecting and improving the United States air quality and ozone layer. Key components of the CAA include reducing ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, Carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs); comprehensive documents that identify how an area will attain NAAQS. Deadlines for attainment were established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the State or the U.S. EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and State and Federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its Air Quality Management Plan (AQMP). Currently, SCAQMD implements the 2012 Lead SIP for the Los Angeles County portion of Basin through the 2012 AQMP, and the 8-hr Ozone, 1-hr Ozone, 24-hr $PM_{2.5}$, and annual $PM_{2.5}$ SIPs through the 2016 AQMP.

3.2.1.2 Safe Affordable Fuel-Efficient Rule

On September 27, 2019, the U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) published the SAFE Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019)). The Part One Rule revoked California's authority to set its own greenhouse gas emissions standards and set zero emission vehicle mandates in California. As a result of the loss of the zero emission vehicles (ZEV) sales requirements in California, there may be fewer ZEVs sold and thus additional gasoline-fueled vehicles sold in future years (CARB 2019).

In April 2020, the U.S. EPA and NHTSA issued the SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (Final SAFE Rule) that relaxed federal greenhouse gas emissions and fuel economy standards. The Final SAFE Rule relaxed federal greenhouse gas emissions and Corporate Average Fuel Economy (CAFE) standards to approximately 1.5 percent (%) per year from model year (MY) 2020 levels over MYs 2021–2026. The previously established emission standards and related "augural" fuel economy standards would have achieved approximately 4% per year improvements through MY 2025. The Final SAFE Rule affects both upstream (production and delivery) and downstream (tailpipe exhaust) carbon dioxide (CO_2) emissions (CARB 2020).

3.2.2 STATE AIR QUALITY REGULATIONS

3.2.2.1 California Clean Air Act

In addition to being subject to Federal requirements, air quality in the State is also governed by more stringent regulations under the California Clean Air Act, which was enacted in 1988 to develop plans and strategies for attaining the California Ambient Air Quality Standards. CARB, which is part of the California Environmental Protection Agency (Cal-EPA), develops Statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The California Clean Air Act is more stringent than Federal Law in a number of ways, including revised standards for PM_{10} and ozone and for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

In California, both the Federal and State Clean Air acts are administered by CARB. It sets all air quality standards including emission standards for vehicles, fuels, and consumer goods as well as monitors air quality and sets control measures for toxic air contaminants. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional level.

3.2.2.2 In-Use Off-Road Diesel Equipment Program

CARB's In-Use Off-Road Diesel Equipment regulation is intended to reduce emissions of NO_x and PM from off-road diesel vehicles, including construction equipment, operating within California. The regulation imposes limits on idling; requires reporting equipment and engine information and labeling all vehicles reported; restricts adding older vehicles to fleets; and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing exhaust retrofits for PM. The requirements and compliance dates of the off-road regulation vary by fleet size, and large fleets (fleets with more than 5,000 horsepower) must meet average targets or comply with Best Available Control Technology (BACT) requirements beginning in 2014. CARB has off-road anti-idling regulations affecting self-propelled diesel-fueled vehicles of 25 horsepower and up. The off-road anti-idling regulations limit idling on applicable equipment to no more than five minutes, unless exempted due to safety, operation, or maintenance requirements.

3.2.2.3 On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) regulation (also known as the Truck and Bus Regulation) is intended to reduce emission of NO_X, PM, and other criteria pollutants generated from existing on-road diesel vehicles operating in California. The regulation applies to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately or federally owned, and for privately and publicly owned school buses. Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can

report to show compliance with more flexible options. Fleets complying with the heavier trucks and buses schedule must install the best available PM filter on 1996 model year and newer engines, and replace the vehicle eight years later. Trucks with 1995 model year and older engines had to be replaced starting in 2015. Replacements with a 2010 model year or newer engine meet the final requirements, but owners can also replace the equipment with used trucks that have a future compliance date (as specified in regulation). By 2023, all trucks and buses must have at least 2010 model year engines with few exceptions.

3.2.2.4 CARB Stationary Diesel Engines – Emission Regulations

In 1998, CARB identified DPM as a TAC. To reduce public exposure to DPM, in 2000, the Board approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan) (CARB, 2000). Integral to this plan is the implementation of control measures to reduce DPM such as the control measures for stationary diesel-fueled engines. As such, diesel generators must comply with regulations under CARB's amendments *to Airborne Toxic Control Measure for Stationary Compression Ignition Engines* and be permitted by SCAQMD.

3.2.2.5 CARB Air Quality and Land Use Handbook

In 1998, CARB identified particulate matter from diesel-fueled engines as a TAC. CARB's Air Quality and Land Use Handbook is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process (CARB, 2005). The CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for "sensitive" land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds. Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the Handbook relative to the Project Area include taking steps to consider or avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
- Within 300 feet of gasoline fueling stations; or
- Within 300 feet of dry-cleaning operations (dry cleaning with TACs is being phased out and will be prohibited in 2023). The SCAQMD (Regulation 14, Rule 21) has established emission controls for the use of perchloroethylene, the most common dry-cleaning solvent.

3.2.2.6 California Building Industry Association vs. Bay Area Air Quality Management District

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." The opinion also holds that when a project has "potentially significant exacerbating effects on existing environmental hazards" those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on "existing conditions" rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project "would worsen existing conditions." The court also found that the limited number of express CEQA provisions that require analysis of the impacts of the existing environment on a project – such as impacts associated with

school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA's scope.

3.2.3 REGIONAL AIR QUALITY REGULATIONS

3.2.3.1 Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a Joint Powers Authority under California State Law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. SCAG encompasses the counties of Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial.

SCAG is designated as a Metropolitan Planning Organization (MPO) and as a Regional Transportation Planning Agency. Under SB 375, SCAG, as a designated MPO, is required to prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). On September 3, 2020, SCAG's Regional Council adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS). The 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Information contained in Chapter 5: The Road to Greater Mobility and Sustainable Growth of the 2020 RTP/SCS forms the basis for the land use and transportation components of the AQMP and are utilized in the preparation of air quality forecasts and consistency analysis included in the AQMP.

3.2.3.2 SCAQMD Air Quality Management Plan

The purpose of an AQMP is to bring an air basin into compliance with federal and state air quality standards and is a multi-tiered document that builds on previously adopted AQMPs. The 2016 AQMP for the Basin, which updated the 2012 AQMP, was approved by the SCAQMD Board of Directors on March 3, 2017. The 2016 AQMP provides new and revised demonstration's for how the SCAQMD, in coordination with Federal, State, Regional and Local Governments will bring the Basin back into attainment for the following NAAQS: 1997 8-hour Ozone; 1997 1-hour Ozone; 2008 8-hour Ozone; 2006 24-hour $PM_{2.5}$; and 2012 Annual $PM_{2.5}$.[2]

On December 2, 2022, the SCAQMD Governing Board adopted the 2022 AQMP, which focuses on bringing the South Coast Air Basin and the Salton Sea Air Basin into compliance with the 2015 8-hour ozone standard. The South Coast Air Basin, which is in extreme nonattainment, has an attainment year of 2037 for the 2015 8-hour ozone NAAQS. The 2022 AQMP includes growth projections developed by SCAG for the 2020 RTP/SCS that help inform emissions inventories. The 2022 AQMP plans to reduce NOx emissions to 60 tons per day, which is 67% below the current 2037 baseline, in order to meet this standard. The 2022 AQMP notes that widespread adoption of zero emission technologies across all sectors and a combination of local, state, and federal action will be required to achieve the projected NOx reductions.

The SCAQMD proposes incentive programs and 49 control measures that, with state and federal control measures, can achieve the required NOx reductions. SCAQMD's incentive programs would focus on promoting deployment of existing zero emission and low NOx technology and on developing new zero

[2] Although the 2006 24-hour $PM_{2.5}$ standard was focused on in the 2012 AQMP, it has since been determined, primarily due to unexpected drought conditions, that it is impractical to meet the standard by the original attainment year. Since adoption of the 2012 AQMP, the U.S. EPA approved a re-classification to "serious" non-attainment for the standard, which requires a new attainment demonstration and deadline.

emission and ultra-low NOx technologies. SCAQMD's control measures consist of 30 measures that target stationary sources and 18 that target mobile sources. The 2022 AQMP includes stationary source measures that seek to reduce NOx from residential combustion sources, commercial combustion sources, and large combustion sources, as further described below.

- Residential control measures focus on reducing NOx by replacing appliances and devices (e.g., for heating and cooking) with zero emission and low-NOx appliances.
- Commercial control measures are identified reduce NOx from commercial appliances, cooking devices, and small internal combustion engines and commercial combustion equipment.
- Large combustion control measures have been included reduce NOx from sources including boilers, engines, and facilities.

In addition, the 2022 AQMP includes stationary source measures to reduce VOC, including reducing leaks and providing incentive funding for the adoption of low-VOC technology. The 2022 AQMP also includes co-benefit measures that quantify the reduction in criteria air pollutants from energy and climate change measures. Other stationary source measures (e.g., education and outreach) seek to reduce all criteria pollutants.

Finally, the 2022 AQMP includes mobile source control measures grouped into the following categories:

- Emission growth management, which mitigate emissions from new or redevelopment projects.
- Facility based, which focus on mobile sources at port, railyards, and intermodal facilities.
- On-road and off-road mobile sources, which focus on vehicles and equipment used during construction and operation at industrial sites.
- Incentives, for early deployment of cleaner technology.
- Other measures (e.g., infrastructure planning).

3.2.3.3 SCAQMD Rules

In order to control air pollution in the Basin, the SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various federal and state air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by CARB or the U.S. EPA. In general, the SCAQMD rules that are anticipated to be applicable to the development of the proposed Project, include:

- **Rule 203 (Permit to Operate)** sets forth the requirement that the use or operation any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, must receive a written permit to operate from the Executive Officer.
- **Rule 401 (Visible Emissions)** prohibits discharge into the atmosphere from any single source of emission for any contaminant for a period or periods aggregating more than three minutes in any one hour that is as dark or darker in shade than that designated as No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- **Rule 402 (Nuisance)** prohibits discharges of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- **Rule 403 (Fugitive Dust)** prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent capacity in the air). Rule 403 requires the implementation of Best Available Control Measures and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres.
- **Rule 445 (Wood Burning Devices)** prohibits installation of woodburning devices such as fireplaces and wood-burning stoves in new development unless the development is located at an elevation above 3,000 feet or if existing infrastructure for natural gas service is not available within 150-feet of the development. All fireplaces installed within the Proposed Project area will be natural gas fueled fireplaces.
- **Rule 481 (Spray Coating Operations)** imposes equipment and operational restrictions during construction for all spray painting and spray coating operations.
- **Rule 1108 (Cutback Asphalt)** prohibits the sale or use of any cutback asphalt containing more than 0.5 percent by volume organic compounds which evaporate at 260°C (500°F) or lower.
- **Rule 1113 (Architectural Coatings)** establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.
- **Rule 1143 (Consumer Paint Thinners and Multi-Purpose Solvents)** prohibits the supply, sale, manufacture, blend, package or repackage of any consumer paint thinner or multi-purpose solvent for use in the SCAQMD unless consumer paint thinners or other multi-purpose solvents comply with applicable VOC content limits.
- **Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities)** specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos containing materials. The requirements for demolition and renovation activities include asbestos surveying, notification, asbestos containing materials removal procedures and time schedules, asbestos containing materials handling and clean-up procedures, and storage, disposal, and land filling requirements for asbestos containing waste materials.

3.2.4 CITY OF MONTEREY PARK

3.2.4.1 General Plan

The City of Monterey Park's General Plan contains the following policies regarding air quality that may be applicable to the proposed Project:

- Resources Element, Air Quality
  - Policy 5.1: Continue to improve traffic flow through and within the city.
  - Policy 5.2: Review zoning regulations annually to identify whether revisions are required to accommodate and encourage the use of alternative-fuel vehicles (for example, electric cars).
  - Policy 5.3: Encourage employer rideshare and transit incentives programs by local businesses.
  - Policy 5.4: Enhance pedestrian and bicycle circulation within Monterey Park.

- Policy 5.5: Support the development of higher density housing in close proximity to commercial service centers.
- Policy 5.6: Synchronize traffic signals to reduce the number of stops and starts by automobiles.
- Policy 5.7: Promote energy conservation and recycling by the public and private sectors.
- Policy 5.8: Integrate air quality planning with land use and transportation planning.

- Environmental Justice Element
  - Policy 2.1: Limit exposure to environmental pollution through good planning and the public process.

3.2.4.2 Municipal Code

The City of Monterey Park's Municipal Code Section 4.30.050(t), Public Nuisances, states that properties cannot have uncovered areas that cause excessive dust.

4 AIR QUALITY IMPACT ANALYSIS

This chapter evaluates the direct and indirect air quality impacts that could result from implementation of the proposed Project.

4.1 THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed Project could result in potentially significant impacts related to air quality if it would:

- Conflict with or obstruct implementation of the applicable SCAQMD 2020 AQMP;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the South Coast Air Basin is designated non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.1.1 REGIONAL AND TOXIC AIR CONTAMINANT SIGNIFICANCE THRESHOLDS

Consistent with the guidance contained in Appendix G of the State CEQA Guidelines, this Report relies upon SCAQMD-recommended methods and pollutant thresholds to evaluate whether the proposed Project's emissions would violate any air quality standard, contribute substantially to an existing or projected air quality violation, result in a cumulatively considerable net increase in nonattainment criteria air pollutants, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD's recommended thresholds of significance for criteria pollutants and incremental increases in health risk are shown in Table 4-1.

Table 4-1: SCAQMD-Recommended CEQA Thresholds

Pollutant	Maximum Daily Emissions (lbs/day)	
	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	

Source: SCAQMD, 2019

4.1.2 LOCALIZED SIGNIFICANCE THRESHOLDS

In addition to establishing thresholds of significance for emissions of criteria air pollutants on a regional level, the SCAQMD has also developed Localized Significance Thresholds (LSTs) that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standards, which would result in significant adverse localized air quality effects. The LST methodology takes into account a number of factors, including (1) existing ambient air quality in each Source Receptor Area (SRA); (2) how many acres the project would disturb in a day; and (3) how far project construction and operational activities would take place from the nearest sensitive receptor. Unlike the regional emission significance thresholds, LSTs have only been developed for NO_X, CO, PM_{10} and $PM_{2.5}$. This Report evaluates the proposed Project's potential to expose sensitive receptors to substantial pollutant concentrations pursuant to the SCAQMD Final Localized Significance Thresholds Methodology. This methodology provides screening tables for one through five-acre project scenarios. The construction and operational LSTs for one-acre, two-acre, and five-acre sites in SRA 11 (South San Gabriel Valley), the SRA in which the City of Monterey is located, are shown in Table 4-2.

Table 4-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 11

Pollutant Monitored	Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary				
	82 Feet	164 Feet	328 Feet	656 Feet	1,640 Feet
ONE-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	83	84	96	123	193
Carbon Monoxide (CO)	673	760	1,113	2,110	6,884
Particulate Matter (PM_{10})	5	13	29	60	153
Particulate Matter ($PM_{2.5}$)	4	5	9	20	83
Pollutant Monitored	**Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary**				
	82 Feet	**164 Feet**	**328 Feet**	**656 Feet**	**1,640 Feet**
ONE-ACRE SITE					
Operational Thresholds					
Nitrogen Oxides (NO_x)	83	84	96	123	193
Carbon Monoxide (CO)	673	760	1,113	2,110	6,884
Particulate Matter (PM_{10})	1	4	7	15	37
Particulate Matter ($PM_{2.5}$)	1	2	3	5	20
TWO-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	121	118	126	147	206
Carbon Monoxide (CO)	1,031	1,143	1,554	2,660	7,530
Particulate Matter (PM_{10})	7	22	37	68	162
Particulate Matter ($PM_{2.5}$)	5	8	12	24	89
Operational Thresholds					
Nitrogen Oxides (NO_x)	121	118	126	147	206

Table 4-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 11					
Pollutant Monitored	**Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance (in Feet) from Site Boundary**				
	82 Feet	**164 Feet**	**328 Feet**	**656 Feet**	**1,640 Feet**
Carbon Monoxide (CO)	1,031	1,143	1,554	2,660	7,530
Particulate Matter (PM_{10})	2	6	9	17	39
Particulate Matter ($PM_{2.5}$)	2	2	3	6	22
FIVE-ACRE SITE					
Construction Thresholds					
Nitrogen Oxides (NO_x)	183	176	184	202	245
Carbon Monoxide (CO)	1,814	1,984	2,549	4,024	9,342
Particulate Matter (PM_{10})	14	43	59	91	186
Particulate Matter ($PM_{2.5}$)	9	12	19	34	104
Operational Thresholds					
Nitrogen Oxides (NO_x)	183	176	184	202	245
Carbon Monoxide (CO)	1,814	1,984	2,549	4,024	9,342
Particulate Matter (PM_{10})	4	11	15	22	45
Particulate Matter ($PM_{2.5}$)	2	3	5	9	25

Source: SCAQMD 2008, modified by MIG 2021

Note: The localized thresholds for NOx in this table account for the conversion of NO to NO_2. The emission thresholds are based on NO_2 levels, as this is the compound associated with adverse health effects.

4.1.3 CARBON MONOXIDE "HOT SPOT" THRESHOLDS

Historically, to determine whether a project poses the potential for a CO hotspot, the quantitative CO screening procedures provided in the *Transportation Project-Level Carbon Monoxide Protocol* (the Protocol) were used (UCD ITS 1997). The Protocol determines whether a project may worsen air quality by increasing the percentage of vehicles in cold start modes by two percent or more; significantly increasing traffic volumes by five percent or more; or worsening traffic flow at signalized intersections (by increasing average delay at intersections operating at level of service (LOS) E or F or causing an intersection that would operate at LOS D or better without the project, to operate at LOS E or F). With new vehicles and improvements in fuels resulting in fewer emissions, the retirement of older polluting vehicles, and new controls and programs, CO concentrations have declined dramatically in California. As a result of emissions controls on new vehicles, the number of vehicles that can idle, and the length of time that vehicles can idle before emissions would trigger a CO impact, has increased. Therefore, the use of LOS as an indicator is no longer applicable for determining CO impacts.

The Bay Area Air Quality Management District (BAAQMD) developed a screening-level analysis for CO hotspots in 2010 which finds that projects that are consistent with the applicable congestion management program, and that do not cause traffic volumes at affected intersections to increase to more than 44,000 vehicles per hour, would not result in a CO hotspot that could exceed State or Federal air quality standards (BAAQMD 2017 pg. 3-4). CO modeling was conducted for the SCAQMD's 2003 AQMP at four busy intersections during morning and evening peak hour periods as well. The busiest intersection studied in this analysis, Wilshire Boulevard and Veteran Avenue, had 8,062 vehicles per hour during morning peak hours, 7,719 vehicles per hour during evening peak hours, and approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour CO concentration for this intersection was 4.6

ppm, which is less than a fourth of the 1-hour CAAQS CO standard (20 ppm). The BAAQMD screening threshold is generally consistent with the results of the CO modeling conducted for the SCAQMD's 2003 AQMP.

Therefore, for purposes of this Report, the Project would pose the potential for a CO hotspot if it would exceed the BAAQMD's screening traffic level for peak hour intersection traffic volumes (44,000 vehicles per hour) (thereby having the potential to result in CO concentrations that exceed 1-hour State [20 ppm], 1-hour Federal [35 ppm], and/or State and Federal 8-hour [9 ppm] ambient air quality standards for CO).

4.2 ANALYSIS METHODOLOGY

Construction and operational emissions associated with buildout of the Project were calculated and evaluated against regional and localized significance thresholds to determine potential impacts on air quality standards, as well as to evaluate potential impacts associated with DPM emissions on sensitive receptors. In addition, a discussion is provided below on the potential for the Project to generate CO hotspots or objectionable odors. An evaluation of whether the Project is consistent with existing plans and policies protecting air quality is also included below.

4.2.1 MASS-BASED CRITERIA AIR POLLUTANT AND TAC EMISSIONS

4.2.1.1 Construction Emissions

Construction of the proposed Project would generate equipment exhaust and dust emissions from demolition activities, ground disturbing activities such as site preparation and grading, and the use of gasoline- and diesel-fuel combustion in on- and off-site heavy duty construction equipment, worker vehicle trips, vendor vehicle trips, and haul truck trips, ground disturbing activities. The proposed Project's potential construction emissions were modeled using CalEEMod, Version 2022.1.1.6. The Project's construction activities, duration, and typical equipment used during construction are shown in Table 2-2. The construction phases, duration, and the type and amount of equipment used during construction was generated using CalEEMod default assumptions, and modified to reflect the following Project-specific characteristics:

- **Construction Phase** durations were altered per the applicant's construction schedule. The changes are as follows:
  - **Demolition Phase** was reduced from 20 days (default) to 10 days;
  - **Grading Phase** was extended from 4 days (default) to 20 days to account for additional time that may be required to excavate for the subterranean parking garage;
  - **Trenching Phase** was added to reflect construction operations;
  - **Building Construction Phase** was separated from one phase that was 200 days (default) into two phases, Building Construction (Foundation) and Building Construction (Vertical). Building Construction (Foundation) was 30 days and Building Construction (Vertical) was 360 days;
- **Construction Equipment** was adjusted to reflect the quantity and daily runtime associated with equipment operation during development activities.
- **Off-haul** of approximately 9,000 cubic yards of soil during the grading phase to account for spoils that would be generated while excavating for the subterranean parking garage was added.

- **Vendor Trips per Day** were increased from 14 trips/day to 30 trips/day for the Building Construction (Foundation) phase in order to account for potential concrete deliveries.

4.2.1.2 Operational Emissions

Once operational, the proposed Project would generate emissions from the following sources:

- **Small "area" sources** including landscaping equipment and the use of consumer products such as paints, cleaners, and fertilizers that result in the evaporation of chemicals to the atmosphere during product use.
- **Energy use** in the form of natural gas combustion for building water and space heating needs.
- **Mobile sources** including trips made to and from the site by new residents and visitors.

Similar to construction emissions, criteria air pollutant emissions were estimated in CalEEMod, Version 2022.1.1.6 based on default model assumptions, with the following modifications made to reflect Project-specific characteristics:

- **Area Sources:** Woodstoves and fireplaces were removed pursuant to SCAQMD Rule 445. The quantity of wood-burning fireplaces assumed by CalEEMod were added to natural-gas powered fireplaces.
- **Mobile Sources:** The default, weekday trip generation rate for the proposed land use was updated to reflect the trip generation rate provided in the Transportation Study Screening Analysis prepared for the proposed Project by Ganddini Group (Ganddini Group 2023; see Table 2-1). The average vehicle miles travelled (VMT) distance for the proposed Project identified in the Transportation Study Screening Analysis was also inputted into the model.

4.3 ENVIRONMENTAL IMPACTS

4.3.1 CONSISTENCY WITH THE APPLICABLE AIR QUALITY PLAN

As described in Section 3.1.3, the proposed Project is within the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. Pursuant to the methodology provided in Chapter 12 of the SCAQMD *CEQA Air Quality Handbook*, consistency with the AQMP is affirmed if the Project:

1) Is consistent with the growth assumptions in the AQMP; and
2) Does not increase the frequency or severity of an air quality standards violation, or cause a new one.

Consistency Criterion 1 refers to the growth forecasts and associated assumptions included in the 2022 AQMP. The 2022 AQMP was designed to achieve attainment for all criteria air pollutants within the Basin while still accommodating growth in the region. Projects that are consistent with the AQMP growth assumptions would not interfere with attainment of air quality standards, because this growth is included in the projections used to formulate the AQMP. The proposed Project would generate approximately 50 new residential units by building a 65-unit housing facility and demolishing 15 existing structures/14 habitable residential units. This would fall within the SCAG 2020 RTP/SCS growth projections for the City of Monterey Park (i.e., 2,200 new households and 4,100 residents between 2016 and 2045; SCAG, 2020). Therefore, the proposed Project would not exceed the growth assumptions contained in the AQMP.

Consistency Criterion 2 refers to the CAAQS. In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD, 2003; page D-3). As described below in Section 4.3.2, the proposed Project would not generate construction or operational emissions in excess of SCAQMD criteria air pollutant thresholds.

For the reasons described above, the proposed Project would not conflict with the SCAQMD 2022 AQMP.

4.3.2 CUMULATIVELY CONSIDERABLE NET INCREASE OF CRITERIA AIR POLLUTANTS

The proposed Project would generate both short-term construction emissions and long-term operational emissions. As described in more detail below, the proposed Project would not generate emissions levels that exceed SCAQMD-recommended pollutant thresholds.

4.3.2.1 Unmitigated Construction Emissions

The proposed Project's maximum daily unmitigated construction emissions are shown in Table 4-3. The construction emissions estimates incorporate measures to control and reduce fugitive dust as required by SCAQMD Rule 403 (see Section 3.2.3), but do not incorporate Mitigation Measure AIR-1 (see Section 4.3.3.2). Please refer to Appendix A for CalEEMod output files for detailed construction emissions assumptions.

Table 4-3: Unmitigated Construction Emissions Estimates

Season	Maximum Daily Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer 2023	0.8	11.9	10.5	<0.1	1.8	0.7
Winter 2023	1.4	10.0	14.5	<0.1	1.1	0.6
Summer 2024	1.3	9.5	14.8	<0.1	1.3	0.6
Winter 2024	1.3	9.6	14.0	<0.1	1.3	0.6
Winter 2025	68.3	9.0	13.6	<0.1	1.3	0.5
SCAQMD CEQA Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: MIG, 2023 (see Appendix A)

As shown in Table 4-3, the proposed Project's maximum daily unmitigated construction emissions would be below the SCAQMD's regional pollutant thresholds for all pollutants. This evaluation of construction emissions is conservative, as the construction emissions estimates do not include the emission reductions that would occur with Mitigation Measure AIR-1 identified in Section 4.3.3.2. These emissions reductions would primarily lower the NO_x and PM exhaust emissions that are estimated to occur during construction. Therefore, the construction of the proposed Project would not generate construction-related emissions that exceed SCAQMD CEQA thresholds.

4.3.2.2 Operational Emissions

Once operational, the proposed Project would generate emissions of regulated air pollutants from the sources described in Section 4.2.1.2. The proposed Project's maximum daily unmitigated operational

emissions are shown in Table 4-4. The emissions presented are for the proposed Project's first year of operation, which is presumed to be 2025.

Table 4-4: Operational Emissions Estimates

Source	Maximum Daily Pollutant Emissions (Pounds Per Day)(A)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	3.1	1.0	6.1	<0.1	0.1	0.1
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Mobile	1.7	2.3	24.7	0.1	2.3	2.3
Total Project Emissions(B)	*4.8*	*3.5*	*30.9*	*0.1*	*2.4*	*2.4*
SCAQMD CEQA Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: MIG, 2020 (See Appendix A)

(A) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. Maximum daily ROG, CO, SO_X emissions occur during the summer. Maximum daily NO_X emissions occur during the winter. In general, due to rounding, there is no difference between summer and winter PM_{10} and $PM_{2.5}$ emissions levels for the purposes of this table.

(B) Totals may not equal due to rounding.

As shown in Table 4-4, the proposed Project's maximum daily unmitigated operational emissions would be below the SCAQMD's regional pollutant thresholds for all pollutants. Therefore, the construction of the proposed Project would not generate operations-related emissions that exceed SCAQMD CEQA thresholds.

4.3.2.3 Conclusion

The Basin is currently designated non-attainment for State and/or federal standards for ozone, PM_{10}, and $PM_{2.5}$ (see Table 3-2). As discussed in the preceding subsections, the proposed Project would not result in construction or operational emissions of criteria air pollutants that exceed SCAQMD thresholds of significance. In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD, 2003; page D-3). The SCAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. Since the proposed Project would not individually exceed any SCAQMD CEQA significance thresholds, it would not result in a cumulatively considerable increase in regulated, nonattainment pollutants.

4.3.3 SENSITIVE RECEPTORS AND SUBSTANTIAL POLLUTANT CONCENTRATIONS

The proposed Project would generate both short-term construction emissions and long-term operational emissions that could impact sensitive residential receptors located near the Project; however, as described in more detail below, the proposed Project would not generate short-term or long-term emissions that exceed SCAQMD-recommended localized significance thresholds or result in other substantial pollutant concentrations with the incorporation of mitigation measures.

4.3.3.1 Localized Significance Thresholds

Construction Emissions

The proposed Project's maximum daily construction emissions are compared against the SCAQMD's-recommended LSTs in Table 4-2. Consistent with the SCAQMD's LST methodology, the emissions included in the construction LST analysis are onsite emissions only, and the LST thresholds against which these onsite emissions are compared are based on the Project size, in acres. The LST

thresholds are for SRA 11 (South San Gabriel Valley), the SRA in which the proposed Project is located, and are based on a receptor distance of 25 meters (82 feet), the closest LST receptor distance threshold recommended for use by the SCAQMD, and a project site of 2 acres.

The emissions presented in Table 4-5 incorporate certain best available control measures the Project would be subject to pursuant to SCAQMD Rule 403, Fugitive Dust. Specifically, the CalEEMod project file applies an approximate 55 percent reduction in PM_{10} and $PM_{2.5}$ fugitive dust emissions through site watering (two times daily) and replacement of ground cover. These estimated reductions are consistent with the reductions realized by implementation of the numerous best available control measures contained in SCAQMD Rule 403.

Table 4-5: LST Construction Analysis

Construction Phase	Maximum Daily Emissions (Pounds per Day)(A)			
	NO_X	CO	PM_{10}(B)	$PM_{2.5}$(B)
Demolition 2023	4.6	4.8	1.5	0.4
Site Preparation 2023	1.3	2.1	0.1	0.1
Grading 2023	11.9	10.6	1.8	0.7
Trenching 2023	1.1	1.3	0.1	0.1
Building Construction (Foundation) 2023	3.2	8.2	1.2	0.4
Building Construction (Vertical) 2023	10.0	14.5	1.4	0.6
Building Construction (Vertical) 2024	9.6	14.8	1.3	0.6
Building Construction (Vertical) 2025	9.0	13.6	1.3	0.5
Paving 2025	2.8	4.2	0.2	0.1
Architectural Coating 2025	1.0	2.7	0.4	0.1
SCAQMD LST Threshold (1-Acre)	**83**	**673**	**5**	**4**
Threshold Exceeded?	No	No	No	No

Source: MIG 2023 (see Appendix A)

(A) Emissions presented are worst-case total emissions and may reflect summer or winter emissions levels.

(B) PM emissions assume compliance with SCAQMD Rule 403 best available control measures for site watering and replacing ground cover.

As shown in Table 4-5, the maximum daily onsite emissions generated during all construction phases associated with the Project would be below the SCAQMD's LST thresholds for a two-acre site at a distance of 82 feet (approximately 25 meters), the closest LST receptor distance threshold recommended for use by the SCAQMD.

Operational Emissions

The Project's maximum daily operational emissions are compared against the SCAQMD's-recommended LSTs in Table 4-6. Consistent with the SCAQMD's LST methodology, the emissions included in the operational LST analysis are onsite emissions only, and the LST thresholds against which these onsite emissions are compared are based on the Project size, in acres. The LST thresholds are for SRA 11 (South San Gabriel Valley), the SRA in which the Project is located and are based on a receptor distance of 82 feet (approximately 25 meters), the closest LST receptor distance threshold recommended for use by the SCAQMD.

Table 4-6: LST Operational Analysis				
Emissions	**Maximum Onsite Pollutant Emissions (Pounds Per Day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Area Sources	1.0	6.1	0.1	0.1
Energy Sources	0.0	0.0	0.0	0.0
Mobile Sources(A)	2.3	24.7	<0.1	<0.1
Total Emissions(B)	3.3	30.8	0.1	0.1
SCAQMD LST Threshold(C)	**121**	**1,031**	**2**	**2**
Threshold Exceeded?	No	No	No	No

Source: MIG 2023(see Appendix A).

(A) Mobile source emissions estimates reflect potential onsite vehicle emissions only and were derived by assuming 2% of operational mobile source emissions in Table 4-3 will occur onsite.

(B) Emissions presented are worst-case emissions and may reflect summer or winter emissions levels. In general, due to rounding, there is no difference between summer and winter emissions levels for the purposes of this table.

(C) LST threshold is based on a 2.0-acre project size and 25-meter (82-foot) receptor distance.

As shown in Table 4-6, the maximum daily onsite emissions generated during operation of the proposed Project would not exceed the SCAQMD's recommended LST thresholds.

4.3.3.2 Construction Health Risk Assessment

As described in Section 3.1.7, sensitive receptors are located north, south, east, and west of the Project site. The proposed Project would generate DPM, a TAC, from combustion of diesel fuel in heavy-duty construction equipment and trucks used to access the site during construction. The Project would involve different construction activities occurring at different intensities over an approximately 19-month timeframe, with initial groundbreaking taking place potentially as early as July 2023. Receptors would be exposed to varying concentrations of pollutants throughout the construction period.

Due to the proposed Project's close proximity to adjacent sensitive receptors, construction exhaust emissions of DPM would likely have the potential to result in incremental cancerogenic health risk increases that are in excess of the SCAQMD's threshold of 10 excess cancers in a million. To reduce potential DPM exhaust emissions generated by Project construction activities, MIG recommends the Project incorporate Mitigation Measure AIR-1 into the proposed Project to ensure the proposed Project does not generate TAC emissions that have the potential to result in substantial adverse health effects at receptor locations near the proposed Project:

> **Mitigation Measure AIR-1: Reduce Construction-Related DPM Emissions.** To reduce potential short-term adverse health risks associated with PM_{10} exhaust emissions generated during project construction activities, including emissions of diesel particulate matter (DPM), the Applicant and/or it's designated contractors, contractor's representatives, or other appropriate personnel to shall implement the following construction equipment restrictions for the Project:
>
> 1. Contractors shall use the smallest size equipment capable of safely completing work activities.
> 2. Electric hook-ups shall be provided for stationary equipment (e.g., pumps, compressors, welding sets).
> 3. The use of portable diesel generators shall be prohibited at the Project site.

4. All construction equipment with a rated power-output of 50 horsepower or greater shall meet U.S. EPA and CARB Tier IV Final Emission Standards for PM_{10}. This may be achieved via the use of equipment with engines that have been certified to meet Tier IV emission standards, or through the use of equipment that has been retrofitted with a CARB-verified diesel emission control strategy (e.g., particulate filter) capable of reducing exhaust PM_{10} emissions to levels that meet Tier IV standards.

As an alternatively to using equipment that meets Tier IV Final Emissions Standards for off-road equipment with a rated power-output of 50 horsepower or greater, the Applicant may prepare and submit a refined construction health risk assessment to the City once additional Project-specific construction information is known (e.g., specific construction equipment type, quantity, engine tier, and runtime by phase). The refined health risk assessment shall demonstrate and identify any measures necessary such that the proposed Project's incremental cancerogenic health risk at nearby sensitive receptor locations is below the applicable SCAQMD threshold of 10 cancers in a million.

Implementation of Mitigation Measure AIR-1 would reduce the amount of DPM that adjacent receptors would be exposed to by approximately 51 percent and reduce the potential for substantial pollutant concentrations and adverse health risks resulting from construction-related DPM emissions to a less than significant level.

4.3.3.3 Carbon Monoxide Hot Spots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near high volume intersections. Several screening procedures have been developed by air districts throughout the state to assess whether a project may result in a CO impact. For example, the Bay Area Air Quality Management District (BAAQMD) developed a screening threshold in 2010 which states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis (BAAQMD, 2017 pg. 3-4). Additionally, the SCAQMD's 2003 AQMP and *1992 Federal Attainment Plan for Carbon Monoxide* demonstrated that CO levels were below the CAAQS at an intersection with a daily traffic volume of up to approximately 100,000 vehicles per day. The proposed Project would add approximately 331 new vehicle trips to the roadway system per day (Ganddini Group 2023). The worst-case hourly intersection volume in the project vicinity would be relatively unaffected by the Project, which is projected to add a total of 20 trips during the AM peak hour and 25 trips during the PM peak hour. This is well below the BAAQMD screening threshold, and surrounding roadway segments would not have traffic volumes exceeding 100,000 vehicles per day. The proposed Project would not cause intersection volumes to exceed any daily (100,000) or hourly (44,000) screening vehicle volumes maintained by the SCAQMD and other regional air districts and, therefore, would not result in significant CO concentrations.

4.3.3.4 Conclusion

The proposed Project's construction and operational criteria air pollutant emissions would be below the SCAQMD's LSTs, and additional traffic and associated emissions generated by the Project would not cause a CO hot spot. The proposed Project's PM_{10} exhaust emissions (i.e., DPM) could, however, result in incremental cancerogenic risk increases that exceed the SCAQMD's threshold. MIG recommends the proposed Project incorporate Mitigation Measure AIR-1, which requires all off-road equipment with a rated power-output of 50 horsepower or greater meet Tier IV emission standard. Alternatively, the Applicant may conduct a new construction health risk assessment once additional details are known regarding

construction activities that would occur at the site, and identify new construction equipment limitations/requirements such that Project health risks remain below the SCAQMD threshold. With the implementation of Mitigation Measure AIR-1, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations.

4.3.4 ODORS

According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed Project does not include such sources but would result in the construction of a new apartment complex and parking garage that could generate odors related to vehicle parking and refuse collection (e.g., oils, lubricants, fuel vapors, short-term waste odors). These activities would not generate sustained odors that would affect substantial numbers of people.

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5 REPORT PREPARERS AND REFERENCES

This report was prepared by MIG under contract to The Commons of MPK LLC. This report reflects the independent, objective, professional opinion of MIG. The following individuals were involved in the preparation and review of this report:

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APPENDIX A: CalEEMod Output Files

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338-410 South Alhambra Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	338-410 South Alhambra
Construction Start Date	7/1/2023
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.2
Location	34.05812935706017, -118.11639112960901
County	Los Angeles-South Coast
City	Monterey Park
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4191
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.8

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	65.0	Dwelling Unit	0.00	103,653	0.00	—	192	—
Enclosed Parking with Elevator	45.0	1000sqft	1.03	45,067	0.00	—	—	—
Other Asphalt Surfaces	30.0	1000sqft	0.70	0.00	13,700	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.60	1.34	11.9	14.8	0.04	0.39	1.41	1.79	0.36	0.34	0.70	—	5,356	5,356	0.29	0.65	9.76	5,567
Mit.	1.17	1.00	6.42	16.2	0.04	0.17	1.41	1.50	0.16	0.34	0.43	—	5,356	5,356	0.29	0.65	9.76	5,567
% Reduced	27%	26%	46%	-9%	—	56%	—	16%	56%	—	38%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.71	68.3	10.0	14.5	0.02	0.38	1.12	1.36	0.35	0.27	0.59	—	3,066	3,066	0.13	0.17	0.17	3,102
Mit.	1.27	68.3	5.79	15.9	0.02	0.19	1.12	1.17	0.18	0.27	0.41	—	3,066	3,066	0.13	0.17	0.17	3,102
% Reduced	26%	—	42%	-9%	—	50%	—	14%	49%	—	30%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	2.04	6.86	10.2	0.02	0.25	0.70	0.94	0.23	0.17	0.39	—	2,186	2,186	0.09	0.08	1.52	2,214
Mit.	0.84	1.99	4.02	11.2	0.02	0.12	0.70	0.82	0.11	0.17	0.28	—	2,186	2,186	0.09	0.08	1.52	2,214
% Reduced	27%	2%	41%	-10%	—	51%	—	13%	50%	—	29%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.37	1.25	1.86	< 0.005	0.05	0.13	0.17	0.04	0.03	0.07	—	362	362	0.02	0.01	0.25	366
Mit.	0.15	0.36	0.73	2.05	< 0.005	0.02	0.13	0.15	0.02	0.03	0.05	—	362	362	0.02	0.01	0.25	366
% Reduced	27%	2%	41%	-10%	—	51%	—	13%	50%	—	29%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.23	0.84	11.9	10.5	0.04	0.39	1.41	1.79	0.36	0.34	0.70	—	5,356	5,356	0.29	0.65	9.76	5,567
2024	1.60	1.34	9.50	14.8	0.02	0.34	0.98	1.33	0.32	0.24	0.55	—	3,088	3,088	0.13	0.11	4.91	3,128
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.71	1.41	10.0	14.5	0.02	0.38	1.12	1.36	0.35	0.27	0.59	—	3,066	3,066	0.13	0.17	0.17	3,102
2024	1.60	1.34	9.58	14.0	0.02	0.34	0.98	1.33	0.32	0.24	0.55	—	3,040	3,040	0.13	0.11	0.13	3,076
2025	1.51	68.3	9.01	13.6	0.02	0.30	0.98	1.28	0.28	0.24	0.51	—	3,014	3,014	0.13	0.11	0.12	3,050
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.41	0.32	2.66	3.67	0.01	0.09	0.36	0.45	0.09	0.08	0.17	—	1,015	1,015	0.05	0.07	0.86	1,038

2024	1.15	0.96	6.86	10.2	0.02	0.25	0.70	0.94	0.23	0.17	0.39	—	2,186	2,186	0.09	0.08	1.52	2,214
2025	0.19	2.04	1.15	1.79	< 0.005	0.04	0.12	0.16	0.04	0.03	0.07	—	381	381	0.02	0.01	0.25	386
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.07	0.06	0.48	0.67	< 0.005	0.02	0.07	0.08	0.02	0.02	0.03	—	168	168	0.01	0.01	0.14	172
2024	0.21	0.17	1.25	1.86	< 0.005	0.05	0.13	0.17	0.04	0.03	0.07	—	362	362	0.02	0.01	0.25	366
2025	0.03	0.37	0.21	0.33	< 0.005	0.01	0.02	0.03	0.01	0.01	0.01	—	63.1	63.1	< 0.005	< 0.005	0.04	63.9

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.58	0.38	6.42	11.1	0.04	0.10	1.41	1.50	0.09	0.34	0.43	—	5,356	5,356	0.29	0.65	9.76	5,567
2024	1.17	1.00	5.53	16.2	0.02	0.17	0.98	1.15	0.16	0.24	0.39	—	3,088	3,088	0.13	0.11	4.91	3,128
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.27	1.06	5.79	15.9	0.02	0.19	1.12	1.17	0.18	0.27	0.41	—	3,066	3,066	0.13	0.17	0.17	3,102
2024	1.17	0.99	5.61	15.4	0.02	0.17	0.98	1.15	0.16	0.24	0.39	—	3,040	3,040	0.13	0.11	0.13	3,076
2025	1.11	68.3	5.41	15.1	0.02	0.15	0.98	1.13	0.14	0.24	0.37	—	3,014	3,014	0.13	0.11	0.12	3,050
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.28	0.22	1.54	3.92	0.01	0.04	0.36	0.40	0.04	0.08	0.12	—	1,015	1,015	0.05	0.07	0.86	1,038
2024	0.84	0.71	4.02	11.2	0.02	0.12	0.70	0.82	0.11	0.17	0.28	—	2,186	2,186	0.09	0.08	1.52	2,214
2025	0.14	1.99	0.67	1.96	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	381	381	0.02	0.01	0.25	386
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.05	0.04	0.28	0.72	< 0.005	0.01	0.07	0.07	0.01	0.02	0.02	—	168	168	0.01	0.01	0.14	172
2024	0.15	0.13	0.73	2.05	< 0.005	0.02	0.13	0.15	0.02	0.03	0.05	—	362	362	0.02	0.01	0.25	366

2025	0.03	0.36	0.12	0.36	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	63.1	63.1	< 0.005	< 0.005	0.04	63.9

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.81	4.83	3.08	30.7	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,624	8,655	3.38	0.24	24.9	8,836
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.09	4.15	3.23	22.2	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,330	8,360	3.38	0.25	1.37	8,521
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.45	4.54	2.40	26.5	0.06	0.05	2.27	2.32	0.05	0.40	0.45	30.5	7,269	7,299	3.36	0.25	11.2	7,470
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	0.83	0.44	4.83	0.01	0.01	0.41	0.42	0.01	0.07	0.08	5.05	1,203	1,209	0.56	0.04	1.85	1,237

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Area	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902

Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.81	4.83	3.08	30.7	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,624	8,655	3.38	0.24	24.9	8,836
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Area	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.09	4.15	3.23	22.2	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,330	8,360	3.38	0.25	1.37	8,521
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.96	1.68	2.30	22.6	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,249	6,249	0.24	0.23	10.4	6,335
Area	0.49	2.86	0.10	3.89	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	96.6	96.6	< 0.005	< 0.005	—	96.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.45	4.54	2.40	26.5	0.06	0.05	2.27	2.32	0.05	0.40	0.45	30.5	7,269	7,299	3.36	0.25	11.2	7,470
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Area	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	149	149	0.01	< 0.005	—	149
Water	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54
Waste	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	0.45	0.83	0.44	4.83	0.01	0.01	0.41	0.42	0.01	0.07	0.08	5.05	1,203	1,209	0.56	0.04	1.85	1,237

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Area	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.81	4.83	3.08	30.7	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,624	8,655	3.38	0.24	24.9	8,836
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Area	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.09	4.15	3.23	22.2	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,330	8,360	3.38	0.25	1.37	8,521
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.96	1.68	2.30	22.6	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,249	6,249	0.24	0.23	10.4	6,335

Area	0.49	2.86	0.10	3.89	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	96.6	96.6	< 0.005	< 0.005	—	96.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.45	4.54	2.40	26.5	0.06	0.05	2.27	2.32	0.05	0.40	0.45	30.5	7,269	7,299	3.36	0.25	11.2	7,470
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Area	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	149	149	0.01	< 0.005	—	149
Water	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54
Waste	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	0.45	0.83	0.44	4.83	0.01	0.01	0.41	0.42	0.01	0.07	0.08	5.05	1,203	1,209	0.56	0.04	1.85	1,237

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	2.91	3.79	0.01	0.12	—	0.12	0.11	—	0.11	—	535	535	0.02	< 0.005	—	537
Demolition	—	—	—	—	—	—	0.96	0.96	—	0.15	0.15	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.7	14.7	< 0.005	< 0.005	—	14.7
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.43	2.43	< 0.005	< 0.005	—	2.43
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.41	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.2	72.2	< 0.005	< 0.005	0.31	73.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	0.03	1.70	0.64	0.01	0.02	0.35	0.37	0.02	0.09	0.11	—	1,318	1,318	0.08	0.21	2.99	1,385
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.93

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.1	36.1	< 0.005	0.01	0.04	37.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.98	5.98	< 0.005	< 0.005	0.01	6.28

3.2. Demolition (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.78	3.91	0.01	0.06	—	0.06	0.06	—	0.06	—	535	535	0.02	< 0.005	—	537
Demolition	—	—	—	—	—	—	0.96	0.96	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.7	14.7	< 0.005	< 0.005	—	14.7
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.43	2.43	< 0.005	< 0.005	—	2.43
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.41	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.2	72.2	< 0.005	< 0.005	0.31	73.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	0.03	1.70	0.64	0.01	0.02	0.35	0.37	0.02	0.09	0.11	—	1,318	1,318	0.08	0.21	2.99	1,385
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.93
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.1	36.1	< 0.005	0.01	0.04	37.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.98	5.98	< 0.005	< 0.005	0.01	6.28

3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.27	1.91	< 0.005	0.06	—	0.06	0.06	—	0.06	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.66	0.66	< 0.005	< 0.005	—	0.66
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.14	2.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	290	290	0.01	< 0.005	—	291

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.66	0.66	< 0.005	< 0.005	—	0.66
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.71	6.62	7.77	0.01	0.34	—	0.34	0.31	—	0.31	—	1,182	1,182	0.05	0.01	—	1,186
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	64.7	64.7	< 0.005	< 0.005	—	65.0
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.82	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	144	144	0.01	< 0.005	0.61	147
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.33	0.09	5.19	1.96	0.03	0.05	1.07	1.12	0.05	0.29	0.34	—	4,030	4,030	0.24	0.64	9.15	4,234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.61	7.61	< 0.005	< 0.005	0.01	7.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	221	221	0.01	0.03	0.22	232
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	1.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.04	38.4

3.6. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.18	1.18	8.27	0.01	0.05	—	0.05	0.04	—	0.04	—	1,182	1,182	0.05	0.01	—	1,186
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	< 0.005	< 0.005	—	65.0
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.82	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	144	144	0.01	< 0.005	0.61	147
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.33	0.09	5.19	1.96	0.03	0.05	1.07	1.12	0.05	0.29	0.34	—	4,030	4,030	0.24	0.64	9.15	4,234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.61	7.61	< 0.005	< 0.005	0.01	7.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	221	221	0.01	0.03	0.22	232
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	1.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.04	38.4

3.7. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.60	2.22	< 0.005	0.09	—	0.09	0.08	—	0.08	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.60	2.22	< 0.005	0.09	—	0.09	0.08	—	0.08	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.3	27.3	< 0.005	< 0.005	—	27.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.52	4.52	< 0.005	< 0.005	—	4.54
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.34	5.37	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	949	949	0.04	0.03	4.03	964
Vendor	0.08	0.04	1.20	0.60	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	2.62	1,025
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910
Vendor	0.08	0.04	1.25	0.61	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	0.07	1,023
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.39	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.14	76.0
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.7	80.7	< 0.005	0.01	0.09	84.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.02	13.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.16	2.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.16	2.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.3	27.3	< 0.005	< 0.005	—	27.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.52	4.52	< 0.005	< 0.005	—	4.54
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.34	5.37	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	949	949	0.04	0.03	4.03	964
Vendor	0.08	0.04	1.20	0.60	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	2.62	1,025
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910

Vendor	0.08	0.04	1.25	0.61	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	0.07	1,023
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.39	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.14	76.0
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.7	80.7	< 0.005	0.01	0.09	84.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.02	13.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.31	1.09	9.00	9.65	0.02	0.38	—	0.38	0.35	—	0.35	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.39	1.49	< 0.005	0.06	—	0.06	0.05	—	0.05	—	262	262	0.01	< 0.005	—	263

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.25	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910
Vendor	0.04	0.02	0.60	0.29	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	469	469	0.02	0.06	0.03	489
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.74	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	0.01	0.27	143
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.5	72.5	< 0.005	0.01	0.08	75.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.4	23.4	< 0.005	< 0.005	0.04	23.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87	0.73	4.79	11.0	0.02	0.19	—	0.19	0.17	—	0.17	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.74	1.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	262	262	0.01	< 0.005	—	263
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.31	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	43.4	43.4	< 0.005	< 0.005	—	43.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910
Vendor	0.04	0.02	0.60	0.29	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	469	469	0.02	0.06	0.03	489
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.74	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	0.01	0.27	143
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.5	72.5	< 0.005	0.01	0.08	75.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.4	23.4	< 0.005	< 0.005	0.04	23.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24	1.03	8.64	9.58	0.02	0.34	—	0.34	0.31	—	0.31	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24	1.03	8.64	9.58	0.02	0.34	—	0.34	0.31	—	0.31	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.89	0.74	6.19	6.86	0.01	0.24	—	0.24	0.22	—	0.22	—	1,216	1,216	0.05	0.01	—	1,220
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.13	1.25	< 0.005	0.04	—	0.04	0.04	—	0.04	—	201	201	0.01	< 0.005	—	202
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.31	4.96	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	928	928	0.04	0.03	3.66	942
Vendor	0.04	0.01	0.54	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	462	462	0.02	0.06	1.25	483
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.37	4.19	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	880	880	0.04	0.03	0.10	890
Vendor	0.04	0.01	0.57	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	463	463	0.02	0.06	0.03	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.27	3.16	0.00	0.00	0.61	0.61	0.00	0.14	0.14	—	639	639	0.03	0.02	1.13	648
Vendor	0.03	0.01	0.41	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	331	331	0.01	0.05	0.39	346
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.58	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	106	106	< 0.005	< 0.005	0.19	107
Vendor	< 0.005	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.8	54.8	< 0.005	0.01	0.06	57.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.69	4.67	11.0	0.02	0.16	—	0.16	0.15	—	0.15	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.69	4.67	11.0	0.02	0.16	—	0.16	0.15	—	0.15	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.49	3.35	7.86	0.01	0.12	—	0.12	0.11	—	0.11	—	1,216	1,216	0.05	0.01	—	1,220
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.61	1.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	201	201	0.01	< 0.005	—	202
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.31	4.96	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	928	928	0.04	0.03	3.66	942
Vendor	0.04	0.01	0.54	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	462	462	0.02	0.06	1.25	483
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.37	4.19	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	880	880	0.04	0.03	0.10	890
Vendor	0.04	0.01	0.57	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	463	463	0.02	0.06	0.03	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.27	3.16	0.00	0.00	0.61	0.61	0.00	0.14	0.14	—	639	639	0.03	0.02	1.13	648
Vendor	0.03	0.01	0.41	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	331	331	0.01	0.05	0.39	346
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.58	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	106	106	< 0.005	< 0.005	0.19	107
Vendor	< 0.005	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.8	54.8	< 0.005	0.01	0.06	57.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16	0.97	8.15	9.51	0.02	0.30	—	0.30	0.27	—	0.27	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.94	1.10	< 0.005	0.03	—	0.03	0.03	—	0.03	—	196	196	0.01	< 0.005	—	197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.4	32.4	< 0.005	< 0.005	—	32.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.32	3.88	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	861	861	0.04	0.03	0.09	872
Vendor	0.03	0.01	0.54	0.26	< 0.005	0.01	0.12	0.13	< 0.005	0.03	0.04	—	455	455	0.02	0.06	0.03	475
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.17	102
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.5	52.5	< 0.005	0.01	0.06	54.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.01	9.08
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	0.65	4.56	10.9	0.02	0.14	—	0.14	0.13	—	0.13	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.53	1.26	< 0.005	0.02	—	0.02	0.02	—	0.02	—	196	196	0.01	< 0.005	—	197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.4	32.4	< 0.005	< 0.005	—	32.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.32	3.88	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	861	861	0.04	0.03	0.09	872
Vendor	0.03	0.01	0.54	0.26	< 0.005	0.01	0.12	0.13	< 0.005	0.03	0.04	—	455	455	0.02	0.06	0.03	475
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.17	102
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.5	52.5	< 0.005	0.01	0.06	54.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.01	9.08
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.75	3.72	0.01	0.13	—	0.13	0.12	—	0.12	—	577	577	0.02	< 0.005	—	579

Paving	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.62	2.62	< 0.005	< 0.005	—	2.63
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.73	2.73	< 0.005	< 0.005	< 0.005	2.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.58	4.00	0.01	0.02	—	0.02	0.02	—	0.02	—	577	577	0.02	< 0.005	—	579
Paving	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.62	2.62	< 0.005	< 0.005	—	2.63
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.73	2.73	< 0.005	< 0.005	< 0.005	2.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	68.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	—	1.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	—	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.55	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	345	345	0.02	0.01	0.03	349

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.58	9.58	< 0.005	< 0.005	0.02	9.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.59	1.59	< 0.005	< 0.005	< 0.005	1.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	68.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	—	1.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	—	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.55	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	345	345	0.02	0.01	0.03	349
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.58	9.58	< 0.005	< 0.005	0.02	9.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.59	1.59	< 0.005	< 0.005	< 0.005	1.61

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Trenching (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.04	1.14	< 0.005	0.06	—	0.06	0.05	—	0.05	—	156	156	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.26	4.26	< 0.005	< 0.005	—	4.28
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.71	0.71	< 0.005	< 0.005	—	0.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Trenching (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.04	1.14	< 0.005	0.06	—	0.06	0.05	—	0.05	—	156	156	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.26	4.26	< 0.005	< 0.005	—	4.28
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.71	0.71	< 0.005	< 0.005	—	0.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Total	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	109	109	0.01	< 0.005	—	109
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	40.1	40.1	< 0.005	< 0.005	—	40.3

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	149

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	109	109	0.01	< 0.005	—	109
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	40.1	40.1	< 0.005	< 0.005	—	40.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	149

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.70	0.65	0.05	5.64	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	17.9	17.9	< 0.005	< 0.005	—	18.0
Total	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.0	14.0	< 0.005	< 0.005	—	14.0
Consumer Products	—	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.08	0.01	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.03	2.03	< 0.005	< 0.005	—	2.04
Total	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.70	0.65	0.05	5.64	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	17.9	17.9	< 0.005	< 0.005	—	18.0

Total	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.0	14.0	< 0.005	< 0.005	—	14.0
Consumer Products	—	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.08	0.01	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.03	2.03	< 0.005	< 0.005	—	2.04
Total	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	0.77	3.98	4.75	0.08	< 0.005	—	7.29
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.25	0.25	< 0.005	< 0.005	—	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	0.77	3.98	4.75	0.08	< 0.005	—	7.29
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.25	0.25	< 0.005	< 0.005	—	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2023	7/14/2023	5.00	10.0	—
Site Preparation	Site Preparation	7/15/2023	7/21/2023	5.00	5.00	—
Grading	Grading	7/22/2023	8/18/2023	5.00	20.0	—
Building Construction (Foundation)	Building Construction	9/2/2023	10/13/2023	5.00	30.0	—

Building Construction (Vertical)	Building Construction	10/14/2023	2/28/2025	5.00	360	—
Paving	Paving	3/1/2025	3/14/2025	5.00	10.0	—
Architectural Coating	Architectural Coating	3/15/2025	3/28/2025	5.00	10.0	—
Trenching	Trenching	8/19/2023	9/1/2023	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction (Foundation)	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction (Foundation)	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Building Construction (Vertical)	Cranes	Diesel	Average	1.00	6.00	367	0.29

Building Construction (Vertical)	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction (Vertical)	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction (Vertical)	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Grading	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Trenching	Trenchers	Diesel	Average	1.00	6.00	40.0	0.50

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	7.00	84.0	0.37
Building Construction (Foundation)	Forklifts	Diesel	Tier 4 Final	1.00	6.00	82.0	0.20
Building Construction (Foundation)	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Building Construction (Vertical)	Cranes	Diesel	Tier 4 Final	1.00	6.00	367	0.29

Building Construction (Vertical)	Forklifts	Diesel	Tier 4 Final	1.00	6.00	82.0	0.20
Building Construction (Vertical)	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Building Construction (Vertical)	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Grading	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Trenching	Trenchers	Diesel	Average	1.00	6.00	40.0	0.50

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	5.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	18.4	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	2.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	56.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

Building Construction (Foundation)	—	—	—	—
Building Construction (Foundation)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Foundation)	Vendor	30.0	10.2	HHDT,MHDT
Building Construction (Foundation)	Hauling	0.00	20.0	HHDT
Building Construction (Foundation)	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	26.3	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Building Construction (Vertical)	—	—	—	—
Building Construction (Vertical)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Vertical)	Vendor	14.3	10.2	HHDT,MHDT
Building Construction (Vertical)	Hauling	0.00	20.0	HHDT
Building Construction (Vertical)	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	2.50	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	5.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	18.4	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	2.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	56.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction (Foundation)	—	—	—	—
Building Construction (Foundation)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Foundation)	Vendor	30.0	10.2	HHDT,MHDT
Building Construction (Foundation)	Hauling	0.00	20.0	HHDT
Building Construction (Foundation)	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	26.3	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Building Construction (Vertical)	—	—	—	—
Building Construction (Vertical)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Vertical)	Vendor	14.3	10.2	HHDT,MHDT
Building Construction (Vertical)	Hauling	0.00	20.0	HHDT
Building Construction (Vertical)	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	2.50	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	209,897	69,966	2,019	224	4,522

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	16,000	—
Site Preparation	0.00	0.00	0.00	0.00	—
Grading	0.00	9,000	10.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.73

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Enclosed Parking with Elevator	1.03	100%
Other Asphalt Surfaces	0.70	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	378	378	378	137,845	8,157	8,157	8,157	2,977,442
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	378	378	378	137,845	8,157	8,157	8,157	2,977,442
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	59
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	7

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	59
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	7

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
209897.32499999998	69,966	2,019	224	4,522

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	449,869	532	0.0330	0.0040	0.00
Enclosed Parking with Elevator	166,362	532	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	449,869	532	0.0330	0.0040	0.00
Enclosed Parking with Elevator	166,362	532	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,422,797	0.00
Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	192,137

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,422,797	0.00
Enclosed Parking with Elevator	0.00	0.00

Other Asphalt Surfaces	0.00	192,137

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	47.97	0.00
Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	47.97	0.00
Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	16.2	annual days of extreme heat
Extreme Precipitation	5.55	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Exposure Indicators	—
AQ-Ozone	69.3
AQ-PM	78.1
AQ-DPM	30.7
Drinking Water	85.3
Lead Risk Housing	52.2
Pesticides	0.00
Toxic Releases	78.7
Traffic	12.3
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	22.1
Haz Waste Facilities/Generators	23.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	12.0
Cardio-vascular	4.10
Low Birth Weights	62.4
Socioeconomic Factor Indicators	—
Education	73.8
Housing	94.9
Linguistic	98.6
Poverty	72.4
Unemployment	17.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	30.71987681
Employed	28.26895932
Median HI	23.73925318
Education	—
Bachelor's or higher	55.47286026
High school enrollment	100
Preschool enrollment	82.0094957
Transportation	—
Auto Access	53.75336841
Active commuting	42.74348775
Social	—
2-parent households	37.76466059
Voting	7.429744643
Neighborhood	—
Alcohol availability	69.16463493
Park access	20.86487874
Retail density	56.19145387
Supermarket access	54.75426665
Tree canopy	61.05479276
Housing	—
Homeownership	33.11946619
Housing habitability	11.15103298
Low-inc homeowner severe housing cost burden	19.41485949
Low-inc renter severe housing cost burden	9.354548954
Uncrowded housing	23.61093289

Health Outcomes	—
Insured adults	27.4990376
Arthritis	0.0
Asthma ER Admissions	84.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	82.8
Cognitively Disabled	48.3
Physically Disabled	41.1
Heart Attack ER Admissions	91.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	78.7
Elderly	29.3
English Speaking	1.7
Foreign-born	99.6
Outdoor Workers	85.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	12.9
Traffic Density	36.1
Traffic Access	87.4
Other Indices	—
Hardship	69.1
Other Decision Support	—
2016 Voting	9.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	49.0
Healthy Places Index Score for Project Location (b)	32.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Updated parking and residential land use lot acreage and building square feet to reflect site plan received 2/20/23
Construction: Construction Phases	Updated construction schedule and phasing based on information provided by applicant on 3/14/23.
Construction: Off-Road Equipment	Updated construction equipment type, number, and hours/day based on MIG Air Quality Impact Analysis and Health Risk Assessment Report 12/22/21.
Construction: Trips and VMT	Updated number of trips for vendors in the Building Construction (Foundation) to account for potential concrete deliveries.
Operations: Vehicle Data	Updated residential weekday and weekend trip rate and trip length based on Transportation Study Screening Assessment received from Ganddini Group 2/10/23
Operations: Fleet Mix	Updated Fleet Mix based on Transportation Study Screening Assessment 2/10/23
Operations: Hearths	Updated number of wood burning fireplaces and stoves to zero in order to be consistent with SCAQMD Rule 455.
Operations: Energy Use	Project is not proposing natural gas use for building systems or appliances.

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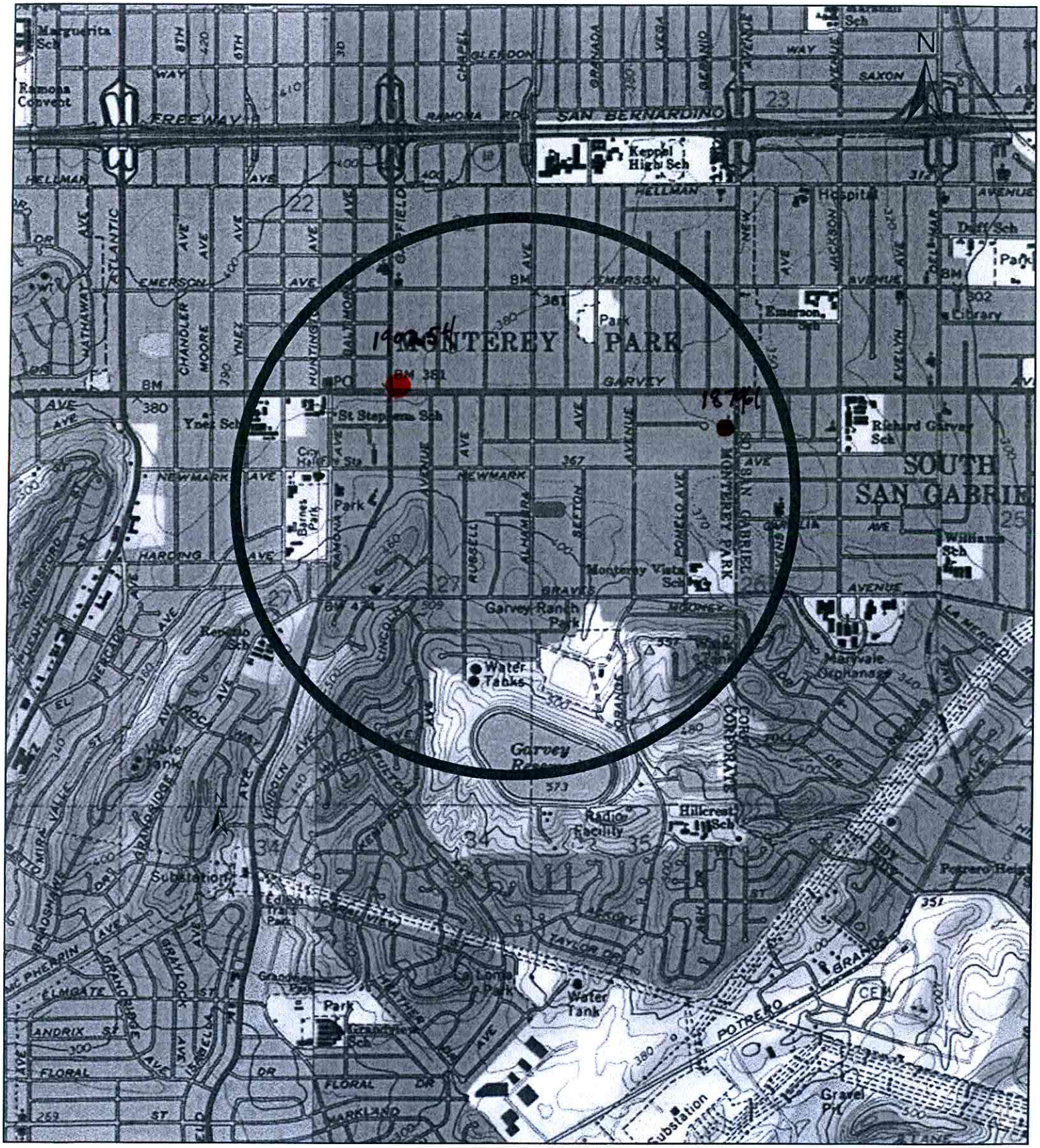
RESOURCES



South Alhambra Avenue 87-Unit Senior Housing Project

Legend

- Project Site
- 0.5 Mile Buffer

M L G

El Monte (1966) USGS 7.5 Quadrangle
Section: 27
Township: 1 South
Range: 12 West
Scale: 1:24,000

Record Search Results

Project: S. Alhambra County: L.A. Search Radius: 1/2 mile

Project Manager: CWP Date: 7-30-18 Conducted by: CWP

Quad(s): El Monte

South ALHAMBRA 87-units Housing Project

Within Project Area				Within ½ Mile of Project Area			
#	Studies	Sites	Other	#	Studies	Sites	Other
1				17	LA 4524		
2				18	LA 7979		
3				19	LA 8901		
4				20	LA 6302		
5				21	LA 5472		
6				22	LA 5466		
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				32			
17				33			
18				34			
19				35	CHLs		
20				36			
				37	CPHI		

Within ½ Mile of Project Area				38			
#	Studies	Sites	Other	39	NR		
1	●	190254		40			
2	●	187961			CR		
3							
4							
5					OHP Directory		
6					(HRI Listing)		
7							
8							
9							
10					Report/Study Bibliography		
11							
12							
13							
14					Historic Maps		
15							
16							

Resource List

South Alhambra 87-Units Housing Project

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-187961		OHP Property Number - 136843; Resource Name - Monterey Park Foursquare Church; Other - Bechtel/AT&T Telecommunications Facility; Other - Full Gospel Foundation Church; Other - Praise Alive Worship Center	Building	Historic	HP16 (Religious building)	2002 (C. Hetzel)	
P-19-190254		OHP Property Number - 183183; Resource Name - T-Mobile West LLC IE04052A/V052 153 Gavey	Building	Historic	HP06 (1-3 story commercial building)	2012 (K.A. Crawford, Michael Brandman Associates)	LA-12139

19-187961

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI#
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code _____ Reviewer _____ Date _____

Resource Name or #: 951011041A - Bechtel/AT&T Telecommunications Facility

P1. Other Identifier:

P2. Location: ☐ Not for Publication ☒ Unrestricted **a. County** Los Angeles

and (P2b and P2C or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad El Monte **Date** **T** 1S; **R** 12W; **¼ of ¼ of Sec** 26; San Bernardino **B.M.**

c. Address 201 S NEW AVE City Monterey Park Zip 91755

d. UTM: Zone ; mE/ mN

e. Other Locational Data:

P3a. Description:

The property contains a one-story church with an L-shaped plan and wood-frame construction. Its structure consists of an original building constructed in 1940 and a more recent 1968 addition. The 1968 addition stands at the front of the property and characterizes the property. Designed in a postwar modern style, the church has a wide cross-gable roof with asphalt shingles and shallow eaves. The exterior walls are clad with an original flagstone veneer on the primary (east) facade and stucco on the secondary elevations. The primary facade consists of a projecting front-gabled section on the south and a side-gabled wing on the north. The southern section contains the church sanctuary and is divided into three bays. The central bay features an inset ornate stained-glass window with vertical divisions. The window is flanked by two slightly angled bays clad with flagstone veneer. An original curved flower bed, defined by a low flagstone wall, stands before the window, and a tall narrow metal steeple with a simple cross marks to top of the projecting front gable. The southern section is characterized by a pair of centrally-located metal double-door entrance doors with plate-glass glazing and two horizontal metal sliding windows. A wide concrete walkway leads to the front entrance, and a short freestanding sign with original flagstone pylons stands in front of the building. Additional full-height window openings mark the building's south elevation at the sanctuary. The fenestration consists of metal sliding windows throughout the building. The building is in good condition. Its integrity is fair.

P3b. Resources Attributes: 16 Religious Building

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
East Elevation, Looking West

P6. Date Constructed/Age and Sources: ☒ Historic ☐ Both ☐ Prehistoric

1940 (E) & 1968 (E) Per owner and Tax Assessment

P7. Owner and Address:
Pastor John Long
201 S New AVE, Monterey Park, CA

P8. Recorded by:
Christopher J. Hetzel
619 E Elmwood AVE #G
Burbank, CA 91501

P9. Date Recorded: 12/10/2002

P10. Survey Type:
Section 106 Compliance Project Review

P11. Report Citation: None.

Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other:

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # 19-187961
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

NRHP Status Code 6Z

Resource Name or #: 951011041A - Bechtel/AT&T Telecommunications Facility

B1. Historic Name: Monterey Park Foursquare Church/Full Gospel Foundation Church
B2. Common Name: Praise Alive Worship Center
B3. Original Use: Church **B4. Present Use:** Church
B5. Architectural Style: Postwar Modern
B6. Construction History:

B7. Moved? ☒ No ☐ Yes ☐ Unknown **Date:** **Original Location:**
B8. Related Features:

B9a. Architect: Unknown **b. Builder:** Unknown
B10. Significance: Theme Religious Architecture **Area** Monterey Park
Period of Significance 1940 & 1968 **Property Type** Church **Applicable Criteria** N/A

The existing building consists of two sections, constructed in 1940 and 1968, respectively, according to the owner and records in the Los Angeles County Tax Assessor Archives. The property was originally owned by the First Gospel Church, who purchased the property in 1938. The Tax Assessor archives list subsequent owners of the property as the Full Gospel Foundation Church and the Monterey Park Foursquare Church.

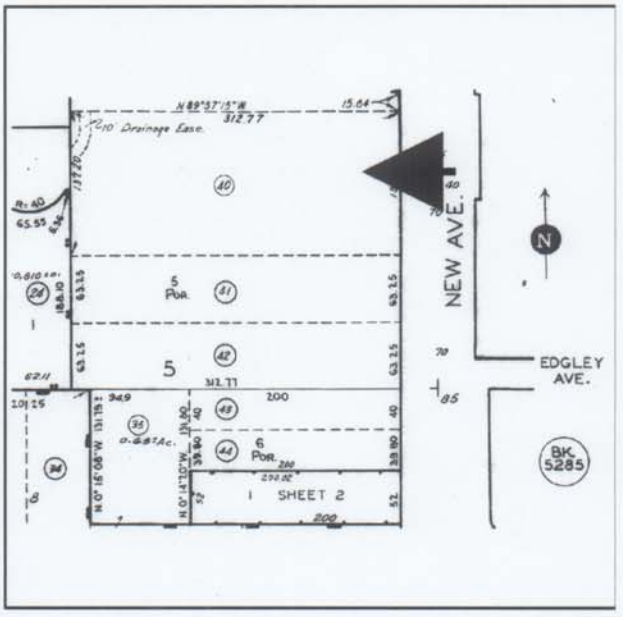
The original 1940 building has been nearly completely obscured by the 1968 addition. The 1968 structure appears to have few exterior alterations and is in good condition. There is no evidence that the property is associated with a recognized architect or craftsman, nor with an important cultural or historic event. The property is not architecturally significant and does not embody characteristics of a significant type, period, or method of construction. It is not located in a cohesive neighborhood. Based on our review, the property is not eligible for listing in the National Register of Historic Places individually or as a contributor to a potential National Register historic district.

B11. Additional Resource Attributes: 16 Religious Building

B12. References:
LA Dept. of Building & Safety, Historical Building Permits
LA County Tax Assessor Archives
LA Public Library Collections
Sanborn Fire Insurance Maps

B13. Remarks:

B14. Evaluator: Christopher J. Hetzel
Date of Evaluation: 12/10/2002



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State of California
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #_____
HRI #_____
Trinomial_____
NRHP Status Code____
Other Listings _____
Review Code_____Reviewer_____Date_____

***Page** 1 of 8 ***Resource Name or #:** T-Mobile West LLC IE04052A/VY052 153 Garvey
***P1. Other Identifier**: None
***P2: Location**: Not for publication Unrestricted X a. County: Los Angeles
And (P2b and P2c or P2d. Attach a location map as necessary.)
***b. USGS Quad** El Monte ***Date**: 1975 T; R; ¼ of ¼ of Sec. _____ B.M._____
c. Address: 153 Garvey Avenue City: Monterey Park Zip: 91755
d. UTM: (Give more than one large or linear resources) Zone: Me/ mN
e. Other Locational Data (e.g. parcel #, directions to resource, elevation, etc. as appropriate);
APN: 5255-007-008
***P3a. Description** (Describe resource and its major elements, include design, materials, condition, alterations, size, setting and boundaries.)
The subject property is a one- and two-story, asymmetrical, rectangular shaped, Modern style, commercial building located on a main commercial artery in the city of Monterey Park. The neighborhood includes both commercial and residential properties. The building has a concrete foundation, stucco exterior, and a flat roof. The roof contains large screened areas to hide roof equipment. The front façade contains several store units with single glass and metal doors and large fixed pane, metal framed, plate glass windows. The signage for each store is located on a flat vertical section above the storefront. The building is in good condition but has been altered by both interior and exterior changes.
***P3b. Resource Attributes:** (List attributes and codes) HP 6: 1-3 Story Commercial Building

P4. Resources Present: **Building X** Structure Object Site District Element of District
P5b. Description of Photo: (View, date Accessions #) View N/11/30/2012
***P6. Date Constructed/Age and Source Historic** X Prehistoric Both c. 1947/Los Angeles County Assessor's Records
***P7. Address**: Ted Cheung, 717 De La Fuente, Monterey Park, CA91754
***P8: Recorded by**: (Name, Affiliation, Address) K.A. Crawford, Michael Brandman Associates, 220 Commerce St., Irvine, CA
***P9. Date Recorded**: 11/30/2012

***P10. Type of Survey:** (Describe) Intensive ***P11: Report Citation** (Cite Survey Report and other sources, or enter "None".) None ***Attachments:** None Location Map Sketch Map **Continuation Sheet** X **Building, Structure and Object Record** X Archaeological Record District Record Liner Resource Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
RESIDENCE, STRUCTURE, AND OBJECT RECORD

Primary #
HRI#
***NRHP Status Code**

***Page** 2 of 8 ***Resource Name or # (Assigned by Recorder)**: T-Mobile West LLC IE04052A/VY052 153 Garvey

B1. Historic Name: None

B2: Common Name: None

B3. Original Use: Commercial/Store

B4: Present Use: Commercial/Store

***B5: Architectural Style:** Modern

***B6: Construction History:** (Construction Date, alterations and dates of alterations)

The subject building was constructed in approximately 1947. The building has been altered with door and window changes and interior alterations. ***B7. Moved?** X **No** Yes Unknown Date: Original Location

***B8. Related Features:** None

B9a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance:** Development of the City of Monterey Park and Modern Architecture **Area:** Monterey Park **Period of Significance:** 1947-Present **Property Type:** Commercial **Applicable Criteria:** A and C

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The City of Monterey Park was originally part of the Mission San Gabriel lands during the Spanish period; became part of Rancho San Antonio during the Mexican period; and eventually passed into American control after 1850. After the 1860s, Richard Garvey purchased much of the former rancho lands and began to develop the property, he brought in water from a nearby river, created the Garvey Dam which provided a steady water supply. His debts forced him to sell much of the land and in 1906, the first subdivision was built. The city was officially incorporated in 1916. In the 1920s, the Anglo and Hispanic residents were joined by Asian immigrants who developed flower and vegetable farms. Monterey Pass Road was improved to allow for an easier way to get their goods to market. The 1920s saw a period of building developments, but the city waned during the Great Depression of the 1930s. After World War II, the area saw a period of steady growth and development with new housing tracts under construction and commercial development. The building was constructed as part of this post-war trend and expansion of Monterey Park. No original building permits were located for the property but a variety of permits were filed for alterations and general tenant improvements with electrical, plumbing, roofing and door and window changes. The building has housed small locally based businesses over the decades. The building is a limited example of the Modern style and has played no significant role in the overall economic development of the city as it is one of hundreds of similar buildings in the city.

B11. Additional Resource Attributes: (List attributes and codes) None

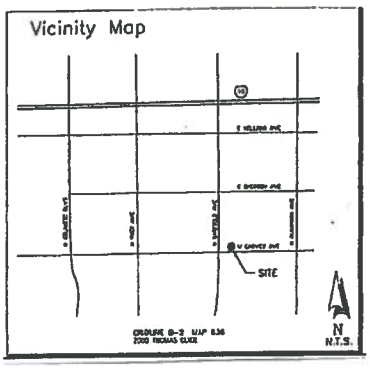
***B12. References:** McAlester and McAlester, *A Guide to American Houses*, 1991; Historicaerials.com; County of Los Angeles Assessor's Records; City of Monterey Park Building Department Records.

B13. Remarks: None

***B14: Evaluators:** K.A. Crawford

***Date of Evaluation:** 11/30/2012

(Sketch Map with north arrow required.)



(This space reserved for official comments.)

State of California – The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 3 of 8 *Resource Name or # (Assigned by recorder) T-Mobile West LLC IE04052A/VY052 153 Garvey

*Recorded by K.A. Crawford/Michael Brandman Associates Date November 30, 2012

Continuation X Update

(Continued from page 2)

Integrity Statement

In regard to the seven aspects of integrity – location, design, setting, materials, workmanship, feeling and association – the c.1947 Modern style commercial building on this property has retained its original location. The building has not been moved. The setting, feeling, and association have not remained intact as the urban area surrounding the structure has changed. The design, materials and workmanship have been altered by door and window changes and interior alterations. The integrity level is fair and the condition of the building is good.

National Register of Historic Places Eligibility Evaluation

The property was assessed under National Register of Historic Places **Criterion A** for its potential significance as part of any historic trends or events that may have made a significant contribution to the broad patterns of our history. The building was constructed as part of the overall continuing commercial and residential development of the Monterey Park area which began in the 1860s and continues to the present time. There is no significant trend or event associated with the property. **Therefore, the property does not appear to meet the criteria for significance under Criterion A: Event.**

The property was assessed under National Register of Historic Places **Criterion B** for its potential significance and association with a person of importance in national history. There is no evidence to suggest that any of the persons associated with the construction or development of the building were considered important in the history of the property or nation. None of the persons associated with the property appear to be historically significant at the level necessary to meet the criteria for National Register of Historic Places. **Therefore, the property does not appear to meet the criteria for significance under Criterion B: Person.**

The property was assessed under National Register of Historic Places **Criterion C** for its potential significance as a property which embodies the distinctive characteristics of a type, period, method of construction or style of Modern architecture, represents the work of a master architect, builder or craftsman, possesses high artistic values, or represents a significant or distinguishable entity whose components lack individual distinction. The building is a standard, limited example of the Modern style with no distinctive or innovative elements. In addition, the alterations have reduced the building's integrity to below a level of significance. The building's style does not rise to a level of significance to qualify for the National Register of Historic Places. The building is not a good example of the work of a master architect or craftsman as the no persons associated with the design or construction were identified. Therefore, the building cannot be considered to represent the work of a master architect, builder or craftsman. **Therefore, the property does not appear to meet the criteria for significance under Criterion C: Architecture as a good example of Modern style architecture.**

The property was assessed under National Register of Historic Places **Criterion D** for its potential significance and its ability to convey information. The property does not yield, or may not be likely to yield, information important in prehistory or history. In order for buildings, structures, or objects to be significant under Criterion D, they need to "be, or must have been, the principal source of information." This is not the case with this property. **Therefore, the property does not appear to meet the criteria for significance under Criterion D: Information Potential.**

In summary, the property does not appear to qualify for the National Register of Historic Places under any of the above criteria. Therefore, the building is not considered to be an historic resource for the purposes of the NHPA. The property was not accessed for eligibility under the California Register or local Monterey Park Register eligibility.

State of California – The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 4 of 8 *Resource Name or # (Assigned by recorder) T-Mobile West LLC IE04052A/VY052 153 Garvey
*Recorded by K.A. Crawford/Michael Brandman Associates Date November 30, 2012
Continuation X Update

T-Mobile West LLC IE04052A/VY052 153 Garvey
Commercial Building, 153 Garvey Avenue, Monterey Park, CA 91755
View North
November 30, 2012

State of California – The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 5 of 8 *Resource Name or # (Assigned by recorder) T-Mobile West LLC IE04052A/VY052 153 Garvey
*Recorded by K.A. Crawford/Michael Brandman Associates Date November 30, 2012
Continuation X Update

T-Mobile West LLC IE04052A/VY052 153 Garvey
Commercial Building, 153 Garvey Avenue, Monterey Park, CA 91755
View Southeast
November 30, 2012

State of California – The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 6 of 8 *Resource Name or # (Assigned by recorder) T-Mobile West LLC IE04052A/VY052 153 Garvey
*Recorded by K.A. Crawford/Michael Brandman Associates Date November 30, 2012
Continuation X Update

T-Mobile West LLC IE04052A/VY052 153 Garvey
Commercial Building, 153 Garvey Avenue, Monterey Park, CA 91755
View South
November 30, 2012

State of California – The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 7 of 8 *Resource Name or # (Assigned by recorder) T-Mobile West LLC IE04052A/VY052 153 Garvey

*Recorded by K.A. Crawford/Michael Brandman Associates Date November 30, 2012

Continuation X Update

T-Mobile West LLC IE04052A/VY052 153 Garvey
Commercial Building, 153 Garvey Avenue, Monterey Park, CA 91755
View West
November 30, 2012

State of California – The Resource Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 8 of 8 *Resource Name or # (Assigned by recorder) T-Mobile West LLC IE04052A/VY052 153 Garvey
*Recorded by K.A. Crawford/Michael Brandman Associates Date November 30, 2012
Continuation X Update

T-Mobile West LLC IE04052A/VY052 153 Garvey
Commercial Building, 153 Garvey Avenue, Monterey Park, CA 91755
View North
November 30, 2012

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1650 SPRUCE STREET, STE 106
RIVERSIDE, CA 92507
951.787.9222
WWW.MIGCOM.COM

Memo

To: Alex Lai, The Commons of MPK LLC

CC: Cameron Hile, MIG

From: Phil Gleason, and William Deeman

Date: April 14, 2023

SUBJECT: Greenhouse Gas and Energy Analysis for South Alhambra Avenue Multi-Family Condominium Project in Monterey Park, CA

MIG, Inc. (MIG) has prepared this memorandum at the request of The Commons of MPK LLC. This memorandum estimates the potential greenhouse gas (GHG) emissions and energy consumption levels for the proposed South Alhambra Avenue Multi-Family Condominium Project (proposed Project) and evaluates Project emissions against applicable South Coast Air Quality Management District (SCAQMD)-recommended California Environmental Quality Act (CEQA) significance thresholds. As explained in this memorandum, the proposed Project does not have the potential to result in emissions that exceed SCAQMD thresholds or result in wasteful, inefficient, or unnecessary energy consumption.

PROJECT DESCRIPTION

The proposed Project involves the construction of a 65-unit multifamily residential housing facility across three parcels in the eastern part of Monterey Park, California.

The approximately 1.73-acre Project site is located at 338-410 South Alhambra Avenue. The site currently contains 15 residential structures (14 habitable units), which would be demolished as part of the Project. This includes two (2) one-story residential units with garages totaling 1,516 square feet, 12 multi-family units totaling 9,976 square feet, and a single-family residential unit that is 1,600 square feet. The proposed Project would have a building footprint of approximately 45,067 square feet, consisting of the 44,177 square foot parking garage and an 890 square foot lobby. The next three stories would be for residential use. Levels two, three, and four would be approximately 34,551 square feet. The entire building, including the parking garage and lobby, would total approximately 148,578 square feet. There would be approximately 13,700 square feet of landscaped common open space, which would include the approximately 10,374 square foot soft ground courtyard. There would be 99 parking spaces in the parking garages.

The site is located on the east side of South Alhambra Avenue, between East Newmark Avenue and East Graves Avenue, at the eastern terminus of Peach Street in the City of Monterey Park. Interstate 10 (I-10) is approximately 0.9 miles to the north, I-710 is approximately 2.8 miles to the west, and State Route (SR) 60 is approximately 1.9 miles to the south. The nearest airport, Whittier Air Strip, is approximately 2.8 miles southeast of the Project site and the nearest school, Monterey Vista Elementary School, is approximately 0.4 miles southeast of the Project site. The site is bound on the north by single-family residential uses, on the east and south by multi-family residential uses, and on the west by South Alhambra Avenue. Single-family residential uses are located across South Alhambra Avenue.

The proposed Project would involve demolition of existing buildings, site preparation, grading, including soil excavation for the underground parking garage, new building construction, paving, and architectural coating. Construction is expected to begin as soon as July 2023 and last approximately 19 months. The proposed Project's construction schedule and anticipated equipment usage is listed in Table 1*, South Alhambra Avenue Condominium Project Construction Activities.*

Table 1: South Alhambra Avenue Condominium Project Construction Activities		
Construction Phase	**Construction Schedule**	**Typical Equipment Used**
Demolition	10	Concrete/Industrial Saw, Dozer, Backhoe
Site Preparation	5	Grader, Dozer, Backhoe
Grading	20	Excavator, Grader, Dozer, Backhoe
Trenching	10	Trencher
Building Construction (Foundation)	30	Crane, Forklift, Generator, Backhoe, Welder
Building Construction (Vertical)	360	Crane, Forklift, Generator, Backhoe, Welder
Paving	10	Cement and Mortar Mixer, Paver, Roller, Paving Equipment, Backhoe
Architectural Coating	10	Air Compressor

The Project is expected to be operational in 2025. Once operational, the proposed Project would operate as a residential land use, similar to the existing residential uses in the area.

GHG ANALYSIS

Gases that trap heat in the atmosphere and affect regulation of the Earth's temperature are known as GHGs. GHG that contribute to climate change are a different type of pollutant than criteria or hazardous air pollutants because climate change is global in scale, both in terms of causes and effects. Some GHG are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide), and off-gassing from low oxygen environments such as swamps or exposed permafrost (methane); however, GHG emissions from human activities such as fuel combustion (e.g., carbon dioxide) and refrigerants use (e.g., hydrofluorocarbons) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change. The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific GHGs – carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride – and two groups of gases – hydrofluorocarbons and perfluorocarbons. These GHG are the primary GHG emitted into the atmosphere by human activities. The six most common GHG's are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride, hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

GHG emissions from human activities contribute to overall GHG concentrations in the atmosphere and the corresponding effects of global climate change (e.g., rising temperatures, increased severe weather events such as drought and flooding). GHGs can remain in the atmosphere long after they are emitted. The potential for a GHG to absorb and trap heat in the

atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO_2, which has a GWP of one. By comparison, CH_4 has a GWP of 25, which means that one molecule of CH_4 has 25 times the effect on global warming as one molecule of CO_2. Multiplying the estimated emissions for non-CO_2 GHGs by their GWP determines their carbon dioxide equivalent (CO_2e), which enables a project's combined global warming potential to be expressed in terms of mass CO_2 emissions (referred to as CO_2 equivalents, or CO_2e).

The proposed Project is located within the South Coast Air Basin, under the jurisdiction of the SCAQMD. In order to provide guidance to local lead agencies on determining the significance of GHG emissions in their CEQA documents, the SCAQMD convened the first GHG Significance Threshold Working Group (Working Group) meeting on April 30, 2008. To date, the Working Group has convened a total of 15 times, with the last meeting taking place on September 28, 2010. Based on the last Working Group meeting, the SCAQMD identified an interim, tiered approach for evaluating GHG emissions intent on capturing 90 percent of development projects where the SCAQMD is not the lead agency. The following describes the basic structure of the SCAQMD's tiered, interim GHG significance thresholds (SCAQMD, 2010):

- Tier 1 consists of evaluating whether or not the project qualifies for applicable CEQA exemptions.
- Tier 2 consists of determining whether or not a project is consistent with a greenhouse gas reduction plan. If a project is consistent with a greenhouse gas reduction plan, it would not have a significant impact.
- Tier 3 consists of using screening values at the discretion of the Lead Agency; however, the Lead Agency should be consistent for all projects within its jurisdiction. The following thresholds were proposed for consideration:
    - 3,000 $MTCO_2e$ per year for all land use types; or
    - 3,500 $MTCO_2e$ per year for residential; 1,400 $MTCO_2e$ per year for commercial; 3,000 $MTCO_2e$ per year for mixed use projects.
- Tier 4 has three options for projects that exceed the screening values identified in Tier 3:
    - Option 1: Reduce emissions from business-as-usual by a certain percentage (currently undefined); or
    - Option 2: Early implementation of applicable AB 32 Scoping Measures; or
    - Option 3: For plan-level analyses, analyze a project's emissions against an efficiency value of 6.6 $MTCO_2e$/year/service population by 2020 and 4.1 $MTCO_2e$/year/service population by 2035. For project-level analyses, analyze a project's emissions against an efficiency value of 4.8 and 3.0 $MTCO_2e$/year/service population for the 2020 and 2035 calendar years, respectively.

This analysis uses the SCAQMD's interim Tier 3 GHG threshold to evaluate the proposed Project's GHG emissions levels.

GHG Emissions and Plan Consistency Analysis

The proposed project would generate GHG emission from both short-term construction and long-term operational activities. Construction activities would generate GHG emissions primarily from equipment fuel combustion as well as worker, vendor, and haul trips to and from the project site during demolition, site preparation, grading, building construction, paving, and architectural coating activities. Construction activities would cease to emit GHG upon completion, unlike operational emissions that would be continuous year after year until the

project is decommissioned. The SCAQMD recommends amortizing construction GHG emissions over a 30-year period and including with operational emissions estimates. This normalizes construction emissions so that they can be grouped with operational emissions and compared to appropriate thresholds, plans, etc. Once operational, the proposed project would generate GHG emissions from area, stationary, mobile, water/wastewater, and solid waste sources.

The proposed Project's potential GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version (V.) 2022.1.1.6. Project emissions were generated using CalEEMod default assumptions and modified as necessary to reflect the following Project-specific context, information, and details:

- The type and length of construction phases for each site, as well as the equipment used in each phase and the number of worker trips per day, were modified per information provided by the Project applicant; and
- 9,000 cubic yards of soil was added as off-haul during the grading phase.
- The default, weekday trip generation rate and average vehicle miles travelled (VMT) distance was updated to reflect the trip generation rate provided in the Transportation Study Screening Analysis (Ganddini Group 2023).
- Natural gas use was excluded from the Project since the Project does not propose natural gas connections for building or appliance systems.

The proposed Project's total GHG emissions are shown in Table 2, *Project Greenhouse Gas Emissions*.

Table 2: Unmitigated Project Greenhouse Gas Emissions

GHG Emissions Source	**GHG Emissions ($MTCO_2e$ Per Year)**
Operations	
Area	16
Energy	149
Mobile	1,049
Refrigerants	0.1
Waste	15
Water	7.5
Subtotal(A)	1,237
Construction	
Total Construction Emissions	601.9
Average Annual Emissions (30 Year Lifetime)(B)	20.1
Total Project Emissions(A)	1,257
SCAQMD Tier 3 Screening Threshold	**3,000**
SCAQMD Tier 3 Threshold Exceeded?	***No***
Project-specific 2030 GHG Emissions Goal	**1,800**
Project-specific GHG Emissions Goal Exceeded?	***No***

Source: MIG 2023 (See Attachment 1) and SCAQMD, 2010.
(A) Totals may not equal due to rounding.
(B) Construction emissions value has been averaged over a 30-year assumed project lifetime.

As shown in Table 2, the proposed Project's potential increase in GHG emissions would be below the SCAQMD's recommended GHG emissions thresholds. Furthermore, the proposed Project's GHG emissions would also be below an adjusted Project-specific GHG emissions goal of 1,800 $MTCO_2e$ per year, which takes into account post 2020 GHG emissions targets the state is currently working towards.[1] The proposed Project, therefore, would not generate GHG emissions that exceed SCAQMD CEQA thresholds or otherwise result in a significant impact on the environment. The proposed Project also would not conflict with or otherwise obstruct implementation of a plan, policy, or regulation adopted for the purposes of reducing GHG emissions, including the California Air Resources Board (CARB) 2022 Climate Change Scoping Plan (2022 Scoping Plan), the Southern California Association of Governments (SCAG) 2020 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS), or the City of Monterey Park Climate Action Plan (CAP).

Appendix D to CARB's *2022* Scoping Plan Update identifies potential actions that could be undertaken at a local level to support the State's climate goals. In addition to providing guidance to local lead agencies on long-term climate planning (e.g., developing a qualified climate action plan), this appendix also provides a list of key GHG reducing attributes for residential and mixed-use developments; projects that exhibit these attributes represent growth that is consistent with State's GHG reduction goals. Table 3, *Project Consistency with Key GHG Reducing Attributes (2022 Scoping Plan)*, evaluates Project consistency with these attributes.

Table 3: Project Consistency with Key GHG Reducing Attributes (2022 Scoping Plan)

Priority Area	Key Project Attribute	Project Consistency
Transportation Electrification	Provides electric vehicle (EV) charging infrastructure that, at a minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code (CalGreen Code) at the time of project approval.	*Consistent*. The proposed Project would install EV charging infrastructure consistent with Tier II Voluntary Standards specified in the 2022 CalGreen Code.
VMT Reduction	Is located on infill sites that that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).	*Consistent*. The proposed Project is located in a residential portion of the city. The Project would intensify uses at the site by replacing approximately 15 dwelling units with 65 units. The proposed development would continue to be served by existing utilities and essential public services.
	Does not result in the loss or conversion of natural and working lands.	*Consistent.* The proposed Project would consist of developing the site; it would not result in the loss or conversion of natural or working lands.

[1] The 1,800 $MTCO_2e$ per year goal was developed by taking the SCAQMD's Tier 3 threshold of 3,000 $MTCO_2e$ per year, which was the threshold to reduce emissions back to 1990 levels and reducing it by 40 percent (3,000 MTCO2e/yr * (1 - 0.6) = 1,800 $MTCO_2e$/yr). This reduction is consistent with the GHG reductions required by year 2025 to meet GHG reductions required under Senate Bill 32 (to reduce GHG emissions to levels 40% below 1990 levels by 2030). This linear reduction approach oversimplifies the threshold development process. The City of Monterey Park is not adopting nor proposing to use 1,800 $MTCO_2e$ as a CEQA GHG threshold for general use; rather, it is only intended for to provide additional context and information on the magnitude of the proposed Project's GHG emissions.

Table 3: Project Consistency with Key GHG Reducing Attributes (2022 Scoping Plan)		
Priority Area	**Key Project Attribute**	**Project Consistency**
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or Is in proximity to existing transit stops (within a half mile), or Satisfies more detailed and stringent criteria specified in the region's SCS.	*Consistent*. The proposed Project would result in a development intensity of approximately 37.6 dwelling units per acre, which meets the criteria.
	Reduces parking requirements by: • Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet), or • Providing residential parking supply at a ratio of less than one parking space per dwelling unit, or • For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	*Consistent*. In accordance with the Density Bonus Law AB 2334, the proposed Project would incorporate an affordable housing density bonus of 50% increase in housing density provided 15% of housing would be for very low income. The parking ratio associated with this bill would also be applied to the Project: one parking space for zero to one bedroom, and one and a half parking spaces for two to three bedrooms. The proposed Project, which includes the density bonus, would result in approximately 65% fewer parking spaces compared to those of the zoning requirements for the approximately 1.73-acre site.
	At least 20 percent of units included are affordable to lower-income residents.	*Inconsistent*. As identified above, 15% of the dwelling units proposed by the Project would be for very low income per AB 2334, which is less than the 20% identified as a key project attribute.
	Results in no net loss of existing affordable units.	*Consistent*. The proposed Project would not result in the net loss of existing affordable units.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propone or other fossil fuels for space heating, water heating, or indoor cooking.	*Consistent*. The proposed Project would be an all-electric design. The project would not include natural gas plumbing nor use fossil fuels for space heating, water heating, or indoor cooking.
Source: CARB 2022, Appendix D Table 3; and TAG 2023		

As shown in Table 3, the proposed Project would be consistent with all of the Key GHG Reducing Attributes identified in the *2022 Scoping Plan*, except for providing 20% of dwelling units to low-income individuals. This inconsistency does not imply that the Project would result in a potentially significant impact, because consistency with the project attributes is simply a qualitative means by which to assess whether or not a project would *clearly* be consistent with the State's climate goals (CARB 2022, pg. 23). In fact, Appendix D to the *2022 Scoping Plan* provides that, "Lead agencies may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals" (CARB 2022, pgs. 23 and 24). The proposed Project would provide EV charging infrastructure based on the most stringent standards in the CalGreen Code, transit-supportive densities (i.e., greater than 20 dwelling units per acre), have approximately 65%

fewer parking spaces than those allowed for by the City zoning code, result in a net increase in affordable housing at the site, and would not install, nor use, natural gas or fossil fuels for space heating, water heating, or indoor cooking. Therefore, based on these qualitative criteria, the growth proposed by the Project would be consistent with the State's long-term GHG emission reduction goals.

The proposed Project would also be consistent with the SCAG *2020 RTP/SCS*. The proposed Project would add 65 new residential units and demolish 14 existing habitable dwelling units, which is consistent with the regional forecasts in the *2020 RTP/SCS*, in which Monterey Park is projected to add 4,100 residents, 2,200 households, and 2,500 jobs between 2016 and 2045 (SCAG 2020). The proposed Project would incorporate an affordable housing density bonus of 50% increase in housing density provided 15% of housing would be for very low income (consistent with the requirements of AB 2334), and result in approximately 65% fewer parking spaces compared to those of the zoning requirements for the approximately 1.73-acre site. In addition, the Project does not conflict with the *2020 RTP/SCS*'s goal of reducing vehicle miles travelled (VMT), as it met the City's VMT screening criteria and is presumed to have a less than significant VMT impact (Ganddini Group 2023). The Project also aligns with the *2020 RTP/SCS*'s land use and transportation strategy of locating housing near transit by proposing a bus stop along South Alhambra Avenue bordering the proposed housing facility.

The City of Monterey Park has implemented a CAP to address GHG emissions related to land use patterns, transportations, building design, energy use, water demand, and waste generation. It outlines a roadmap to reduce GHG emissions and promote economic growth based on clean technology and sustainable practices. The CAP evaluates current GHG emissions; forecasts "business-as-usual" emissions; establishes a policy to reduce the City's GHG emissions to 15% below baseline 2009 levels by 2020; sets an aspirational goal of achieving GHG emissions 49% below baseline 2009 levels by 2035; and develops reduction strategies for building energy, transportation, land use, consumption, and solid waste emissions sources. These GHG reduction targets are consistent with the State's 2022 Climate Change Scoping Plan, which aims to reduce GHG emissions 40% below 1990 levels by 2030. The proposed Project would be consistent with CAP growth projections, be subject to the latest State energy efficiency standards (consistent with CAP Policy E2), include higher density development near transit (consistent with CAP Policy LU1), provide water efficient landscaping (consistent with CAP Policy W1), and provide solid waste reduction services that divert waste from landfills (consistent with CAP Policy W2).

As described above, the proposed Project would not result in significant GHG emissions, proposes growth in a manner that would be consistent with the State's long-term GHG emission reduction goals, and would not conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions.

ENERGY ANALYSIS

The proposed Project consists of the demolition of 15 existing residential units (14 habitable units) and the construction of a 65-unit multi-family condominium. Construction activities associated with the proposed project would require the use of heavy-duty, off-road equipment and construction-related vehicle trips that would combust fuel, primarily diesel and gasoline. Heavy-duty construction equipment would be required to comply with CARB's airborne toxic control measures, which restrict heavy-duty diesel vehicle idling to five minutes. It is estimated that construction activities would consume approximately 29,879 gallons of diesel fuel to power on-site, off-road heavy-duty construction equipment. Worker, vendor, and haul truck trips during construction activities are anticipated to consume 19,512 gallons of gasoline, 11,103 gallons of diesel, and 4,881 kWh of electricity.

Once operational, the proposed Project would consume energy for vehicle trips, electricity and natural gas usage, and water and wastewater conveyance. As estimated using CalEEMod, the proposed Project building would consume approximately 616 megawatt-hours (mWh) of electricity per year. Operational vehicle trips are anticipated to consume approximately 124,194 gallons of gasoline, 20,374 gallons of diesel, and 63,457 kilowatt-hours (kWh) of electricity on an annual basis, upon its first year of operation.

Electricity, natural gas, and gasoline fuel consumption are energy sources necessary to operate and maintain the proposed Project in a safe manner. Lighting is essential for safety and security and natural gas consumption is needed for heating and other temperature-controlled activities. Due to energy efficiency standards being improved over time, the new structures would be more efficient in its energy consumption than the existing structures. In addition, the proposed Project includes elements that support modes of transportation that would result in less gasoline consumption than transportation by single-occupancy gasoline-powered cars. The proposed project has five parking spaces dedicated for electric vehicles.

The design features of the proposed Project are consistent with the City of Monterey CAP, as discussed above in the GHG Emissions and Plan Consistency Analysis section. The proposed Project would not conflict with or obstruct any other state or local plan adopted for the purposes of increasing the amount of renewable energy or energy efficiency because no other plans are in place in the Project area.

As discussed above, the proposed Project would be built to the latest CALGreen Code and would be more energy efficient than the existing structures at the site and would not conflict with or obstruct a state or local plan for renewable energy. For these reasons, the proposed project would not result in the wasteful, inefficient, or unnecessary use of energy resources.

CONCLUSION

As described in this memo, the proposed Project would not exceed any applicable SCAQMD-recommended CEQA thresholds of significance and is consistent with all applicable plans, policies and regulations adopted for the purposes of reducing GHG emissions and/or energy consumption impacts. The proposed project, therefore, would not result in substantial adverse GHG or energy-related effects on the environment.

REFERENCES

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Attachment 1
CalEEMod Project File Outputs

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338-410 South Alhambra Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	338-410 South Alhambra
Construction Start Date	7/1/2023
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.2
Location	34.05812935706017, -118.11639112960901
County	Los Angeles-South Coast
City	Monterey Park
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4191
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.8

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	65.0	Dwelling Unit	0.00	103,653	0.00	—	192	—
Enclosed Parking with Elevator	45.0	1000sqft	1.03	45,067	0.00	—	—	—
Other Asphalt Surfaces	30.0	1000sqft	0.70	0.00	13,700	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.60	1.34	11.9	14.8	0.04	0.39	1.41	1.79	0.36	0.34	0.70	—	5,356	5,356	0.29	0.65	9.76	5,567
Mit.	1.17	1.00	6.42	16.2	0.04	0.17	1.41	1.50	0.16	0.34	0.43	—	5,356	5,356	0.29	0.65	9.76	5,567
% Reduced	27%	26%	46%	-9%	—	56%	—	16%	56%	—	38%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.71	68.3	10.0	14.5	0.02	0.38	1.12	1.36	0.35	0.27	0.59	—	3,066	3,066	0.13	0.17	0.17	3,102
Mit.	1.27	68.3	5.79	15.9	0.02	0.19	1.12	1.17	0.18	0.27	0.41	—	3,066	3,066	0.13	0.17	0.17	3,102
% Reduced	26%	—	42%	-9%	—	50%	—	14%	49%	—	30%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	2.04	6.86	10.2	0.02	0.25	0.70	0.94	0.23	0.17	0.39	—	2,186	2,186	0.09	0.08	1.52	2,214
Mit.	0.84	1.99	4.02	11.2	0.02	0.12	0.70	0.82	0.11	0.17	0.28	—	2,186	2,186	0.09	0.08	1.52	2,214
% Reduced	27%	2%	41%	-10%	—	51%	—	13%	50%	—	29%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.37	1.25	1.86	< 0.005	0.05	0.13	0.17	0.04	0.03	0.07	—	362	362	0.02	0.01	0.25	366
Mit.	0.15	0.36	0.73	2.05	< 0.005	0.02	0.13	0.15	0.02	0.03	0.05	—	362	362	0.02	0.01	0.25	366
% Reduced	27%	2%	41%	-10%	—	51%	—	13%	50%	—	29%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.23	0.84	11.9	10.5	0.04	0.39	1.41	1.79	0.36	0.34	0.70	—	5,356	5,356	0.29	0.65	9.76	5,567
2024	1.60	1.34	9.50	14.8	0.02	0.34	0.98	1.33	0.32	0.24	0.55	—	3,088	3,088	0.13	0.11	4.91	3,128
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.71	1.41	10.0	14.5	0.02	0.38	1.12	1.36	0.35	0.27	0.59	—	3,066	3,066	0.13	0.17	0.17	3,102
2024	1.60	1.34	9.58	14.0	0.02	0.34	0.98	1.33	0.32	0.24	0.55	—	3,040	3,040	0.13	0.11	0.13	3,076
2025	1.51	68.3	9.01	13.6	0.02	0.30	0.98	1.28	0.28	0.24	0.51	—	3,014	3,014	0.13	0.11	0.12	3,050
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.41	0.32	2.66	3.67	0.01	0.09	0.36	0.45	0.09	0.08	0.17	—	1,015	1,015	0.05	0.07	0.86	1,038

2024	1.15	0.96	6.86	10.2	0.02	0.25	0.70	0.94	0.23	0.17	0.39	—	2,186	2,186	0.09	0.08	1.52	2,214
2025	0.19	2.04	1.15	1.79	< 0.005	0.04	0.12	0.16	0.04	0.03	0.07	—	381	381	0.02	0.01	0.25	386
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.07	0.06	0.48	0.67	< 0.005	0.02	0.07	0.08	0.02	0.02	0.03	—	168	168	0.01	0.01	0.14	172
2024	0.21	0.17	1.25	1.86	< 0.005	0.05	0.13	0.17	0.04	0.03	0.07	—	362	362	0.02	0.01	0.25	366
2025	0.03	0.37	0.21	0.33	< 0.005	0.01	0.02	0.03	0.01	0.01	0.01	—	63.1	63.1	< 0.005	< 0.005	0.04	63.9

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.58	0.38	6.42	11.1	0.04	0.10	1.41	1.50	0.09	0.34	0.43	—	5,356	5,356	0.29	0.65	9.76	5,567
2024	1.17	1.00	5.53	16.2	0.02	0.17	0.98	1.15	0.16	0.24	0.39	—	3,088	3,088	0.13	0.11	4.91	3,128
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.27	1.06	5.79	15.9	0.02	0.19	1.12	1.17	0.18	0.27	0.41	—	3,066	3,066	0.13	0.17	0.17	3,102
2024	1.17	0.99	5.61	15.4	0.02	0.17	0.98	1.15	0.16	0.24	0.39	—	3,040	3,040	0.13	0.11	0.13	3,076
2025	1.11	68.3	5.41	15.1	0.02	0.15	0.98	1.13	0.14	0.24	0.37	—	3,014	3,014	0.13	0.11	0.12	3,050
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.28	0.22	1.54	3.92	0.01	0.04	0.36	0.40	0.04	0.08	0.12	—	1,015	1,015	0.05	0.07	0.86	1,038
2024	0.84	0.71	4.02	11.2	0.02	0.12	0.70	0.82	0.11	0.17	0.28	—	2,186	2,186	0.09	0.08	1.52	2,214
2025	0.14	1.99	0.67	1.96	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	381	381	0.02	0.01	0.25	386
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.05	0.04	0.28	0.72	< 0.005	0.01	0.07	0.07	0.01	0.02	0.02	—	168	168	0.01	0.01	0.14	172
2024	0.15	0.13	0.73	2.05	< 0.005	0.02	0.13	0.15	0.02	0.03	0.05	—	362	362	0.02	0.01	0.25	366

2025	0.03	0.36	0.12	0.36	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	63.1	63.1	< 0.005	< 0.005	0.04	63.9

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.81	4.83	3.08	30.7	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,624	8,655	3.38	0.24	24.9	8,836
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.09	4.15	3.23	22.2	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,330	8,360	3.38	0.25	1.37	8,521
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.45	4.54	2.40	26.5	0.06	0.05	2.27	2.32	0.05	0.40	0.45	30.5	7,269	7,299	3.36	0.25	11.2	7,470
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	0.83	0.44	4.83	0.01	0.01	0.41	0.42	0.01	0.07	0.08	5.05	1,203	1,209	0.56	0.04	1.85	1,237

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Area	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902

Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.81	4.83	3.08	30.7	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,624	8,655	3.38	0.24	24.9	8,836
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Area	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.09	4.15	3.23	22.2	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,330	8,360	3.38	0.25	1.37	8,521
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.96	1.68	2.30	22.6	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,249	6,249	0.24	0.23	10.4	6,335
Area	0.49	2.86	0.10	3.89	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	96.6	96.6	< 0.005	< 0.005	—	96.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.45	4.54	2.40	26.5	0.06	0.05	2.27	2.32	0.05	0.40	0.45	30.5	7,269	7,299	3.36	0.25	11.2	7,470
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Area	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	149	149	0.01	< 0.005	—	149
Water	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54
Waste	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	0.45	0.83	0.44	4.83	0.01	0.01	0.41	0.42	0.01	0.07	0.08	5.05	1,203	1,209	0.56	0.04	1.85	1,237

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Area	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.81	4.83	3.08	30.7	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,624	8,655	3.38	0.24	24.9	8,836
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Area	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.09	4.15	3.23	22.2	0.07	0.12	2.27	2.39	0.12	0.40	0.52	30.5	8,330	8,360	3.38	0.25	1.37	8,521
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.96	1.68	2.30	22.6	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,249	6,249	0.24	0.23	10.4	6,335

Area	0.49	2.86	0.10	3.89	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	96.6	96.6	< 0.005	< 0.005	—	96.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	898	898	0.06	0.01	—	902
Water	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	2.45	4.54	2.40	26.5	0.06	0.05	2.27	2.32	0.05	0.40	0.45	30.5	7,269	7,299	3.36	0.25	11.2	7,470
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Area	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	149	149	0.01	< 0.005	—	149
Water	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54
Waste	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	0.45	0.83	0.44	4.83	0.01	0.01	0.41	0.42	0.01	0.07	0.08	5.05	1,203	1,209	0.56	0.04	1.85	1,237

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	2.91	3.79	0.01	0.12	—	0.12	0.11	—	0.11	—	535	535	0.02	< 0.005	—	537
Demolition	—	—	—	—	—	—	0.96	0.96	—	0.15	0.15	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.7	14.7	< 0.005	< 0.005	—	14.7
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.43	2.43	< 0.005	< 0.005	—	2.43
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.41	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.2	72.2	< 0.005	< 0.005	0.31	73.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	0.03	1.70	0.64	0.01	0.02	0.35	0.37	0.02	0.09	0.11	—	1,318	1,318	0.08	0.21	2.99	1,385
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.93

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.1	36.1	< 0.005	0.01	0.04	37.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.98	5.98	< 0.005	< 0.005	0.01	6.28

3.2. Demolition (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.78	3.91	0.01	0.06	—	0.06	0.06	—	0.06	—	535	535	0.02	< 0.005	—	537
Demolition	—	—	—	—	—	—	0.96	0.96	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.7	14.7	< 0.005	< 0.005	—	14.7
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.43	2.43	< 0.005	< 0.005	—	2.43
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.41	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.2	72.2	< 0.005	< 0.005	0.31	73.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	0.03	1.70	0.64	0.01	0.02	0.35	0.37	0.02	0.09	0.11	—	1,318	1,318	0.08	0.21	2.99	1,385
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.93
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.1	36.1	< 0.005	0.01	0.04	37.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.98	5.98	< 0.005	< 0.005	0.01	6.28

3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.27	1.91	< 0.005	0.06	—	0.06	0.06	—	0.06	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.66	0.66	< 0.005	< 0.005	—	0.66
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.14	2.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	290	290	0.01	< 0.005	—	291

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.66	0.66	< 0.005	< 0.005	—	0.66
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.71	6.62	7.77	0.01	0.34	—	0.34	0.31	—	0.31	—	1,182	1,182	0.05	0.01	—	1,186
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	64.7	64.7	< 0.005	< 0.005	—	65.0
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.82	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	144	144	0.01	< 0.005	0.61	147
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.33	0.09	5.19	1.96	0.03	0.05	1.07	1.12	0.05	0.29	0.34	—	4,030	4,030	0.24	0.64	9.15	4,234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.61	7.61	< 0.005	< 0.005	0.01	7.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	221	221	0.01	0.03	0.22	232
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	1.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.04	38.4

3.6. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.18	1.18	8.27	0.01	0.05	—	0.05	0.04	—	0.04	—	1,182	1,182	0.05	0.01	—	1,186
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.7	64.7	< 0.005	< 0.005	—	65.0
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.82	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	144	144	0.01	< 0.005	0.61	147
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.33	0.09	5.19	1.96	0.03	0.05	1.07	1.12	0.05	0.29	0.34	—	4,030	4,030	0.24	0.64	9.15	4,234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.61	7.61	< 0.005	< 0.005	0.01	7.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	221	221	0.01	0.03	0.22	232
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	1.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.04	38.4

3.7. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.60	2.22	< 0.005	0.09	—	0.09	0.08	—	0.08	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.60	2.22	< 0.005	0.09	—	0.09	0.08	—	0.08	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.3	27.3	< 0.005	< 0.005	—	27.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.52	4.52	< 0.005	< 0.005	—	4.54
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.34	5.37	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	949	949	0.04	0.03	4.03	964
Vendor	0.08	0.04	1.20	0.60	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	2.62	1,025
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910
Vendor	0.08	0.04	1.25	0.61	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	0.07	1,023
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.39	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.14	76.0
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.7	80.7	< 0.005	0.01	0.09	84.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.02	13.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.16	2.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.16	2.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.3	27.3	< 0.005	< 0.005	—	27.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.52	4.52	< 0.005	< 0.005	—	4.54
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.34	5.37	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	949	949	0.04	0.03	4.03	964
Vendor	0.08	0.04	1.20	0.60	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	2.62	1,025
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910

Vendor	0.08	0.04	1.25	0.61	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	982	982	0.04	0.13	0.07	1,023
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.39	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.14	76.0
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.7	80.7	< 0.005	0.01	0.09	84.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.02	13.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.31	1.09	9.00	9.65	0.02	0.38	—	0.38	0.35	—	0.35	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.39	1.49	< 0.005	0.06	—	0.06	0.05	—	0.05	—	262	262	0.01	< 0.005	—	263

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.25	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910
Vendor	0.04	0.02	0.60	0.29	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	469	469	0.02	0.06	0.03	489
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.74	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	0.01	0.27	143
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.5	72.5	< 0.005	0.01	0.08	75.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.4	23.4	< 0.005	< 0.005	0.04	23.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87	0.73	4.79	11.0	0.02	0.19	—	0.19	0.17	—	0.17	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.74	1.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	262	262	0.01	< 0.005	—	263
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.31	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	43.4	43.4	< 0.005	< 0.005	—	43.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.31	0.40	4.56	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	899	899	0.04	0.03	0.10	910
Vendor	0.04	0.02	0.60	0.29	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	469	469	0.02	0.06	0.03	489
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.74	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	0.01	0.27	143
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.5	72.5	< 0.005	0.01	0.08	75.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.4	23.4	< 0.005	< 0.005	0.04	23.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24	1.03	8.64	9.58	0.02	0.34	—	0.34	0.31	—	0.31	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24	1.03	8.64	9.58	0.02	0.34	—	0.34	0.31	—	0.31	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.89	0.74	6.19	6.86	0.01	0.24	—	0.24	0.22	—	0.22	—	1,216	1,216	0.05	0.01	—	1,220
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.13	1.25	< 0.005	0.04	—	0.04	0.04	—	0.04	—	201	201	0.01	< 0.005	—	202
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.31	4.96	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	928	928	0.04	0.03	3.66	942
Vendor	0.04	0.01	0.54	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	462	462	0.02	0.06	1.25	483
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.37	4.19	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	880	880	0.04	0.03	0.10	890
Vendor	0.04	0.01	0.57	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	463	463	0.02	0.06	0.03	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.27	3.16	0.00	0.00	0.61	0.61	0.00	0.14	0.14	—	639	639	0.03	0.02	1.13	648
Vendor	0.03	0.01	0.41	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	331	331	0.01	0.05	0.39	346
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.58	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	106	106	< 0.005	< 0.005	0.19	107
Vendor	< 0.005	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.8	54.8	< 0.005	0.01	0.06	57.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.69	4.67	11.0	0.02	0.16	—	0.16	0.15	—	0.15	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.69	4.67	11.0	0.02	0.16	—	0.16	0.15	—	0.15	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.49	3.35	7.86	0.01	0.12	—	0.12	0.11	—	0.11	—	1,216	1,216	0.05	0.01	—	1,220
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.61	1.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	201	201	0.01	< 0.005	—	202
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.31	4.96	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	928	928	0.04	0.03	3.66	942
Vendor	0.04	0.01	0.54	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	462	462	0.02	0.06	1.25	483
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.37	4.19	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	880	880	0.04	0.03	0.10	890
Vendor	0.04	0.01	0.57	0.27	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	463	463	0.02	0.06	0.03	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.27	3.16	0.00	0.00	0.61	0.61	0.00	0.14	0.14	—	639	639	0.03	0.02	1.13	648
Vendor	0.03	0.01	0.41	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	331	331	0.01	0.05	0.39	346
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.58	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	106	106	< 0.005	< 0.005	0.19	107
Vendor	< 0.005	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.8	54.8	< 0.005	0.01	0.06	57.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16	0.97	8.15	9.51	0.02	0.30	—	0.30	0.27	—	0.27	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.94	1.10	< 0.005	0.03	—	0.03	0.03	—	0.03	—	196	196	0.01	< 0.005	—	197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.4	32.4	< 0.005	< 0.005	—	32.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.32	3.88	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	861	861	0.04	0.03	0.09	872
Vendor	0.03	0.01	0.54	0.26	< 0.005	0.01	0.12	0.13	< 0.005	0.03	0.04	—	455	455	0.02	0.06	0.03	475
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.17	102
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.5	52.5	< 0.005	0.01	0.06	54.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.01	9.08
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	0.65	4.56	10.9	0.02	0.14	—	0.14	0.13	—	0.13	—	1,697	1,697	0.07	0.01	—	1,703
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.53	1.26	< 0.005	0.02	—	0.02	0.02	—	0.02	—	196	196	0.01	< 0.005	—	197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.4	32.4	< 0.005	< 0.005	—	32.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.32	3.88	0.00	0.00	0.86	0.86	0.00	0.20	0.20	—	861	861	0.04	0.03	0.09	872
Vendor	0.03	0.01	0.54	0.26	< 0.005	0.01	0.12	0.13	< 0.005	0.03	0.04	—	455	455	0.02	0.06	0.03	475
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.17	102
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.5	52.5	< 0.005	0.01	0.06	54.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.01	9.08
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.75	3.72	0.01	0.13	—	0.13	0.12	—	0.12	—	577	577	0.02	< 0.005	—	579

Paving	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.62	2.62	< 0.005	< 0.005	—	2.63
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.73	2.73	< 0.005	< 0.005	< 0.005	2.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.58	4.00	0.01	0.02	—	0.02	0.02	—	0.02	—	577	577	0.02	< 0.005	—	579
Paving	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.62	2.62	< 0.005	< 0.005	—	2.63
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.73	2.73	< 0.005	< 0.005	< 0.005	2.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	68.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	—	1.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	—	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.55	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	345	345	0.02	0.01	0.03	349

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.58	9.58	< 0.005	< 0.005	0.02	9.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.59	1.59	< 0.005	< 0.005	< 0.005	1.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	68.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	—	1.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	—	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.55	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	345	345	0.02	0.01	0.03	349
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.58	9.58	< 0.005	< 0.005	0.02	9.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.59	1.59	< 0.005	< 0.005	< 0.005	1.61

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Trenching (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.04	1.14	< 0.005	0.06	—	0.06	0.05	—	0.05	—	156	156	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.26	4.26	< 0.005	< 0.005	—	4.28
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.71	0.71	< 0.005	< 0.005	—	0.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Trenching (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.04	1.14	< 0.005	0.06	—	0.06	0.05	—	0.05	—	156	156	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.26	4.26	< 0.005	< 0.005	—	4.28
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.71	0.71	< 0.005	< 0.005	—	0.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.15	36.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Total	1.99	1.71	2.06	24.7	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,451	6,451	0.24	0.22	24.1	6,546
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.97	1.69	2.26	21.8	0.06	0.04	2.27	2.31	0.04	0.40	0.44	—	6,174	6,174	0.24	0.23	0.63	6,250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.36	0.31	0.42	4.12	0.01	0.01	0.41	0.42	0.01	0.07	0.08	—	1,035	1,035	0.04	0.04	1.72	1,049

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	109	109	0.01	< 0.005	—	109
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	40.1	40.1	< 0.005	< 0.005	—	40.3

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	149

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	656	656	0.04	< 0.005	—	658
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	242	242	0.02	< 0.005	—	243

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	898	898	0.06	0.01	—	902
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	109	109	0.01	< 0.005	—	109
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	40.1	40.1	< 0.005	< 0.005	—	40.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	149

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.70	0.65	0.05	5.64	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	17.9	17.9	< 0.005	< 0.005	—	18.0
Total	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.0	14.0	< 0.005	< 0.005	—	14.0
Consumer Products	—	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.08	0.01	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.03	2.03	< 0.005	< 0.005	—	2.04
Total	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.70	0.65	0.05	5.64	< 0.005	< 0.005	—	< 0.005	0.01	—	0.01	—	17.9	17.9	< 0.005	< 0.005	—	18.0

Total	0.81	3.12	1.02	6.05	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,250	1,250	0.02	< 0.005	—	1,251
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.11	0.06	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Consumer Products	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.11	2.47	0.97	0.41	0.01	0.08	—	0.08	0.08	—	0.08	0.00	1,232	1,232	0.02	< 0.005	—	1,233
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.0	14.0	< 0.005	< 0.005	—	14.0
Consumer Products	—	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.08	0.01	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.03	2.03	< 0.005	< 0.005	—	2.04
Total	0.09	0.52	0.02	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	16.0	16.0	< 0.005	< 0.005	—	16.0

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	0.77	3.98	4.75	0.08	< 0.005	—	7.29
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.25	0.25	< 0.005	< 0.005	—	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.64	24.0	28.7	0.48	0.01	—	44.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.49	1.49	< 0.005	< 0.005	—	1.49
Total	—	—	—	—	—	—	—	—	—	—	—	4.64	25.5	30.2	0.48	0.01	—	45.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	0.77	3.98	4.75	0.08	< 0.005	—	7.29
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.25	0.25	< 0.005	< 0.005	—	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	0.77	4.23	4.99	0.08	< 0.005	—	7.54

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	25.9	0.00	25.9	2.58	0.00	—	90.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.28	0.00	4.28	0.43	0.00	—	15.0

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.74	0.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2023	7/14/2023	5.00	10.0	—
Site Preparation	Site Preparation	7/15/2023	7/21/2023	5.00	5.00	—
Grading	Grading	7/22/2023	8/18/2023	5.00	20.0	—
Building Construction (Foundation)	Building Construction	9/2/2023	10/13/2023	5.00	30.0	—

Building Construction (Vertical)	Building Construction	10/14/2023	2/28/2025	5.00	360	—
Paving	Paving	3/1/2025	3/14/2025	5.00	10.0	—
Architectural Coating	Architectural Coating	3/15/2025	3/28/2025	5.00	10.0	—
Trenching	Trenching	8/19/2023	9/1/2023	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction (Foundation)	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction (Foundation)	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Building Construction (Vertical)	Cranes	Diesel	Average	1.00	6.00	367	0.29

Building Construction (Vertical)	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction (Vertical)	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction (Vertical)	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Grading	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Trenching	Trenchers	Diesel	Average	1.00	6.00	40.0	0.50

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	7.00	84.0	0.37
Building Construction (Foundation)	Forklifts	Diesel	Tier 4 Final	1.00	6.00	82.0	0.20
Building Construction (Foundation)	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Building Construction (Vertical)	Cranes	Diesel	Tier 4 Final	1.00	6.00	367	0.29

Building Construction (Vertical)	Forklifts	Diesel	Tier 4 Final	1.00	6.00	82.0	0.20
Building Construction (Vertical)	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Building Construction (Vertical)	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Grading	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Trenching	Trenchers	Diesel	Average	1.00	6.00	40.0	0.50

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	5.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	18.4	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	2.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	56.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

Building Construction (Foundation)	—	—	—	—
Building Construction (Foundation)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Foundation)	Vendor	30.0	10.2	HHDT,MHDT
Building Construction (Foundation)	Hauling	0.00	20.0	HHDT
Building Construction (Foundation)	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	26.3	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Building Construction (Vertical)	—	—	—	—
Building Construction (Vertical)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Vertical)	Vendor	14.3	10.2	HHDT,MHDT
Building Construction (Vertical)	Hauling	0.00	20.0	HHDT
Building Construction (Vertical)	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	2.50	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	5.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	18.4	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	2.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	56.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction (Foundation)	—	—	—	—
Building Construction (Foundation)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Foundation)	Vendor	30.0	10.2	HHDT,MHDT
Building Construction (Foundation)	Hauling	0.00	20.0	HHDT
Building Construction (Foundation)	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	26.3	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Building Construction (Vertical)	—	—	—	—
Building Construction (Vertical)	Worker	65.7	18.5	LDA,LDT1,LDT2
Building Construction (Vertical)	Vendor	14.3	10.2	HHDT,MHDT
Building Construction (Vertical)	Hauling	0.00	20.0	HHDT
Building Construction (Vertical)	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	2.50	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	209,897	69,966	2,019	224	4,522

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	16,000	—
Site Preparation	0.00	0.00	0.00	0.00	—
Grading	0.00	9,000	10.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.73

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Enclosed Parking with Elevator	1.03	100%
Other Asphalt Surfaces	0.70	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	378	378	378	137,845	8,157	8,157	8,157	2,977,442
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	378	378	378	137,845	8,157	8,157	8,157	2,977,442
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	59
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	7

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	59
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	7

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
209897.32499999998	69,966	2,019	224	4,522

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	449,869	532	0.0330	0.0040	0.00
Enclosed Parking with Elevator	166,362	532	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	449,869	532	0.0330	0.0040	0.00
Enclosed Parking with Elevator	166,362	532	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,422,797	0.00
Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	192,137

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,422,797	0.00
Enclosed Parking with Elevator	0.00	0.00

Other Asphalt Surfaces	0.00	192,137

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	47.97	0.00
Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	47.97	0.00
Enclosed Parking with Elevator	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	16.2	annual days of extreme heat
Extreme Precipitation	5.55	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Exposure Indicators	—
AQ-Ozone	69.3
AQ-PM	78.1
AQ-DPM	30.7
Drinking Water	85.3
Lead Risk Housing	52.2
Pesticides	0.00
Toxic Releases	78.7
Traffic	12.3
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	22.1
Haz Waste Facilities/Generators	23.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	12.0
Cardio-vascular	4.10
Low Birth Weights	62.4
Socioeconomic Factor Indicators	—
Education	73.8
Housing	94.9
Linguistic	98.6
Poverty	72.4
Unemployment	17.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	30.71987681
Employed	28.26895932
Median HI	23.73925318
Education	—
Bachelor's or higher	55.47286026
High school enrollment	100
Preschool enrollment	82.0094957
Transportation	—
Auto Access	53.75336841
Active commuting	42.74348775
Social	—
2-parent households	37.76466059
Voting	7.429744643
Neighborhood	—
Alcohol availability	69.16463493
Park access	20.86487874
Retail density	56.19145387
Supermarket access	54.75426665
Tree canopy	61.05479276
Housing	—
Homeownership	33.11946619
Housing habitability	11.15103298
Low-inc homeowner severe housing cost burden	19.41485949
Low-inc renter severe housing cost burden	9.354548954
Uncrowded housing	23.61093289

Health Outcomes	—
Insured adults	27.4990376
Arthritis	0.0
Asthma ER Admissions	84.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	82.8
Cognitively Disabled	48.3
Physically Disabled	41.1
Heart Attack ER Admissions	91.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	78.7
Elderly	29.3
English Speaking	1.7
Foreign-born	99.6
Outdoor Workers	85.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	12.9
Traffic Density	36.1
Traffic Access	87.4
Other Indices	—
Hardship	69.1
Other Decision Support	—
2016 Voting	9.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	49.0
Healthy Places Index Score for Project Location (b)	32.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Updated parking and residential land use lot acreage and building square feet to reflect site plan received 2/20/23
Construction: Construction Phases	Updated construction schedule and phasing based on information provided by applicant on 3/14/23.
Construction: Off-Road Equipment	Updated construction equipment type, number, and hours/day based on MIG Air Quality Impact Analysis and Health Risk Assessment Report 12/22/21.
Construction: Trips and VMT	Updated number of trips for vendors in the Building Construction (Foundation) to account for potential concrete deliveries.
Operations: Vehicle Data	Updated residential weekday and weekend trip rate and trip length based on Transportation Study Screening Assessment received from Ganddini Group 2/10/23
Operations: Fleet Mix	Updated Fleet Mix based on Transportation Study Screening Assessment 2/10/23
Operations: Hearths	Updated number of wood burning fireplaces and stoves to zero in order to be consistent with SCAQMD Rule 455.
Operations: Energy Use	Project is not proposing natural gas use for building systems or appliances.

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Attachment 2

Energy Calculations

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ATTACHMENT 2

338-410 South Alhambra (Monterey Park)

Energy Calculations

Prepared by: MIG, Inc.

April 2023

Contents:

Sheet 1: Summary of Energy Consumption

Table 1-1: Off-Road Equipment Fuel Consumption

Year	Diesel Fuel Consumed (Gal)	Gasoline Fuel Consumed (Gal)	Electricity Consumed (kWh)
Off-Road Equipment	29,879	--	--
On-Road Equipment	11,103	19,512	4,881
Total	40,981	19,512	4,881

Table 1-2: Operational Vehicle Fuel Consumption

Operational Estimates	Diesel Fuel Consumed (Gal)	Gasoline Fuel Consumed (Gal)	Electricity Consumed (kW)
Mobile Sources	20,374	124,194	63,457

Based on Annual VMT of: 3,453,192

Project Trips per Day: 438 Average trip VMT: 21.6

Table 1-3: Operational Energy Consumption (Building)

Land Use	Electricity (kWh/yr)	Natural Gas (kBTU/yr)
Apartments Mid Rise	449,869	-
Enclosed Parking with Elevator	166,362	-
Other Asphalt	-	-
Total	616,231	-

* CalEEMod default natural gas use of 721,945 kBTU was converted to kWh assuming 3.412 KBTU/kWh

Table 1-4: Total Operational Energy Consumption

Source	Diesel Fuel Consumed (Gal)	Gasoline Fuel Consumed (Gal)	Electricity Consumed (kW)	Natural Gas (kBTU/yr)
Mobile Source	20,374	124,194	63,457	0
Building	0	0	616,231	-
Total	20,374	124,194	679,688	0

Sheet 2: Construction On-site Fuel Consumption Estimations

Phase	Days	Equipment	# of Pieces	Hr/Day	Horsepower	Load Factor	Runtime (bhp-hr)	Consumption (bhp-hr/gal)[1]	Gallons of Diesel
Demolition	10	Concrete/Industrial Saws	1	8	33	0.73	1,927	18.5	104
		Tractors/Loaders/Backhoes	1	8	84	0.37	2,486		134
		Excavators	0	8	36	0.38	0		0
Site Preparation	5	Tractors/Loaders/Backhoes	1	8	84	0.37	1,243		67
		Bore/Drill Rigs	0	8	236	0.50	0		0
Grading	20	Grader	1	8	148	0.41	9,709		525
		Excavators	1	6	36	0.38	1,642		89
		Sweepers/Scrubers	0	8	210	0.46	0		0
		Rollers	0	8	248	0.38	0		0
		Cranes	0	8	173	0.29	0		0
		Tractors/Loaders/Backhoes	2	7	84	0.37	8,702		470
Trenching	10	Trencher	1	6	40	0.50	1,200		65
		Forklifts	0	6	82	0.20	0		0
		Aerial Lifts	0	8	46	0.31	0		0
		Tractors/Loaders/Backhoes	0	8	84	0.37	0		0
		Welders	0	8	46	0.45	0		0
Building Foundation	30	Forklifts	1	6	82	0.20	2,952		160
		Tractors/Loaders/Backhoes	1	6	84	0.37	5,594		302
		Excavators	0	8	80	0.38	0		0
		Pumps	0	8	11	0.74	0		0
		Aerial Lifts	0	8	80	0.31	0		0
Building Vertical	360	Cranes	1	6	367	0.29	229,889		12,426
		Forklifts	1	6	82	0.20	35,424		1,915
		Tractors/Loaders/Backhoes	1	6	84	0.37	67,133		3,629
		Welders	3	8	46	0.45	178,848		9,667
		Excavators	0	8	80	0.38	0		0
Paving	10	Cement and Mortar Mixers	1	6	10	0.56	336		18
		Pavers	1	6	81	0.42	2,041		110
		Paving Equipment	1	8	89	0.36	2,563		139
		Tractors/Loaders/Backhoes	0	8	84	0.37	0		0
		Rollers	0	7	36	0.38	0		0
Architectural Coating	10	Air Compressors	1	6	37	0.48	1,066		58
								Total	29,879

[1] The Carl Moyer Program Guidelines 2017 Revisions. Table D-21. Approved by the Board April 27, 2017.

Sheet 3: Construction Off-site Fuel Consumption Estimates

Phase	Days	Number of Trips	Dist (mi)	Total VMT	Vehicle Class	Percent of Workers by Vehcile Class	Gasoline Average Fuel Economy (MPG)	Gasoline Fuel Split	Gasoline Fuel Consumption by Class (gal)	Diesel Average Fuel Economy (MPG)	Diesel Fuel Split	Diesel Fuel Consumption by Class (gal)	Electricity Average Economy (mi/kWh)	Electric Split	Electricity Consumption by Class (kWh)	Hybrid Average Economy (mi/kWh)	Hybrid Average Economy (mi/gal)	Hybrid Split	Hybrid Consumption by Class (kWh)	Hybrid Consumption by Class (gal)	Gasoline Fuel Consumption by Phase (gal)	Diesel Fuel Consumption by Phase (gal)	Electricity Consumption by Phase (kWh)
Worker Trips																							
Demolition	10	5	18.5	925	LDA	0.25	29.6	91.63%	7	40.8	0.23%	0.0	2.59	5.38%	4.8	6.4	57.1	2.76%	1.0	0.1	35.1	0.0	7.7
					LDT1	0.50	24.7	99.41%	19	23.1	0.04%	0.0	2.59	0.34%	0.6	5.8	63.1	0.22%	0.2	0.0			
					LDT2	0.25	24.4	97.83%	9	32.2	0.32%	0.0	2.59	0.86%	0.8	6.1	60.1	1.00%	0.4	0.0			
Site Preparation	5	2.5	18.5	231.25	LDA	0.25	29.6	91.63%	2	40.8	0.23%	0.0	2.59	5.38%	1.2	6.4	57.1	2.76%	0.3	0.0	8.8	0.0	1.9
					LDT1	0.50	24.7	99.41%	5	23.1	0.04%	0.0	2.59	0.34%	0.1	5.8	63.1	0.22%	0.0	0.0			
					LDT2	0.25	24.4	97.83%	2	32.2	0.32%	0.0	2.59	0.86%	0.2	6.1	60.1	1.00%	0.1	0.0			
Grading	20	10	18.5	3700	LDA	0.25	29.6	91.63%	29	40.8	0.2%	0.1	2.59	5.38%	19.2	6.4	57.1	2.76%	4.0	0.4	140.2	0.2	30.9
					LDT1	0.50	24.7	99.41%	75	23.1	0.04%	0.0	2.59	0.34%	2.4	5.8	63.1	0.22%	0.7	0.1			
					LDT2	0.25	24.4	97.83%	37	32.2	0.3%	0.1	2.59	0.86%	3.1	6.1	60.1	1.00%	1.5	0.2			
Trenching	10	2.5	18.5	462.5	LDA	0.25	29.6	91.6%	4	40.8	0.2%	0.0	2.59	5.38%	2.4	6.4	57.1	2.76%	0.5	0.1	17.5	0.0	3.9
					LDT1	0.50	24.7	99.4%	9	23.1	0.04%	0.0	2.59	0.34%	0.3	5.8	63.1	0.22%	0.1	0.0			
					LDT2	0.25	24.4	97.8%	5	32.2	0.3%	0.0	2.59	0.86%	0.4	6.1	60.1	1.00%	0.2	0.0			
Building Foundation	30	65.7	18.5	36464	LDA	0.25	29.6	91.6%	282	40.8	0.2%	0.5	2.59	5.38%	189.5	6.4	57.1	2.76%	39.5	4.4	1,382.1	1.7	304.5
					LDT1	0.50	24.7	99.4%	734	23.1	0.04%	0.3	2.59	0.34%	23.6	5.8	63.1	0.22%	6.8	0.6			
					LDT2	0.25	24.4	97.8%	366	32.2	0.3%	0.9	2.59	0.86%	30.1	6.1	60.1	1.00%	15.0	1.5			
Building Vertical	360	65.7	18.5	437562	LDA	0.25	29.6	91.6%	3,384	40.8	0.2%	6.2	2.59	5.38%	2,273.8	6.4	57.1	2.76%	473.5	52.8	16,585.2	20.3	3,653.4
					LDT1	0.50	24.7	99.4%	8,811	23.1	0.04%	3.3	2.59	0.34%	283.0	5.8	63.1	0.22%	81.5	7.5			
					LDT2	0.25	24.4	97.8%	4,390	32.2	0.3%	10.8	2.59	0.86%	361.3	6.1	60.1	1.00%	180.3	18.2			
Paving	10	7.5	18.5	1387.5	LDA	0.25	29.6	91.6%	11	40.8	0.2%	0.0	2.59	5.38%	7.2	6.4	57.1	2.76%	1.5	0.2	52.6	0.1	11.6
					LDT1	0.50	24.7	99.4%	28	23.1	0.04%	0.0	2.59	0.34%	0.9	5.8	63.1	0.22%	0.3	0.0			
					LDT2	0.25	24.4	97.8%	14	32.2	0.3%	0.0	2.59	0.86%	1.1	6.1	60.1	1.00%	0.6	0.1			
Architectural Coating	10	26.3	18.5	4865.5	LDA	0.25	29.6	91.6%	38	40.8	0.2%	0.1	2.59	5.38%	25.3	6.4	57.1	2.76%	5.3	0.6	184.4	0.2	40.6
					LDT1	0.50	24.7	99.4%	98	23.1	0.04%	0.0	2.59	0.34%	3.1	5.8	63.1	0.22%	0.9	0.1			
					LDT2	0.25	24.4	97.8%	49	32.2	0.3%	0.1	2.59	0.86%	4.0	6.1	60.1	1.00%	2.0	0.2			
Sub-Total Worker Trips Energy Consumption					Gasoline (gal)				18,405.9	Diesel (gal)		22.5	Electricity (kWh)		3,238.5	Hybrid (kWh; gal of gasoline)			816.0	87.2	18,405.9	22.5	4,054.5
Vendor Trips																							
Demolition	0	0	6.94	0	MHDT	0.5	5.2	18.6%	0	9.0	79.51%	0	0.96	0.73%	0.00	--	--	--	--	--	0.0	0.0	0.0
					HHDT	0.5	4.1	0.1%	0.00	6.1	89.68%	0	0.56	0.58%	0.00	--	--	--	--	--			
Grading	0	5	6.94	0	MHDT	0.5	5.2	18.6%	0	9.0	79.51%	0	0.96	0.73%	0.00	--	--	--	--	--	0.0	0.0	0.0
					HHDT	0.5	4.1	0.1%	0.00	6.1	89.68%	0	0.56	0.58%	0.00	--	--	--	--	--			
Building Foundation	30	30	10.2	9180	MHDT	0.5	5.2	18.6%	163	9.0	79.51%	408	0.96	0.73%	35.00	--	--	--	--	--	164.0	1,078.7	82.6
					HHDT	0.5	4.1	0.1%	1	6.1	89.68%	671	0.56	0.58%	47.58	--	--	--	--	--			
Building Vertical	360	14.3	10.2	52510	MHDT	0.5	5.2	18.6%	934	9.0	79.51%	2,331	0.96	0.73%	200.21	--	--	--	--	--	938.0	6,170.3	472.4
					HHDT	0.5	4.1	0.1%	4	6.1	89.68%	3,839	0.56	0.58%	272.16	--	--	--	--	--			
Finishing	0	107	6.94	0	MHDT	0.5	5.2	18.6%	0	9.0	79.51%	0	0.96	0.73%	0.00	--	--	--	--	--	0.0	0	0.0
					HHDT	0.5	4.1	0.1%	0	6.1	89.68%	0	0.56	0.58%	0.00	--	--	--	--	--			
Sub-Total Vendor Trips Energy Consumption					Gasoline (gal)				1,102.0	Diesel (gal)		7,249.0	Electricity (kWh)		555.0	--	--	--	--	--	1,102	7,249	555
Hauling Trips																							
Demolition	10	18.4	20	3680	HHDT	1.0	4.1	0.06%	0.5	6.1	89.68%	538	0.6	0.58%	38.15	--	--	--	--	--	0.5	538	38.15
Grading	20	56.3	20	22520	HHDT	1.0	4.1	0.06%	3.3	6.1	89.68%	3,293	0.6	0.58%	233.44	--	--	--	--	--	3.3	3,293	233.44
Building Foundation	0	0	20	0	HHDT	1.0	4.1	0.06%	0.00	6.1	89.68%	0	0.6	0.58%	0.00	--	--	--	--	--	0.0	0	0.00
Building Vertical	0	0	20	0	HHDT	1.0	4.1	0.06%	0.00	6.1	89.68%	0	0.6	0.58%	0.00	--	--	--	--	--	0.0	0	0.00
Sub-Total Haul Trips Energy Consumption					Gasoline (gal)				3.891	Diesel (gal)		3,831.1	Electricity (kWh)		272	--	--	--	--	--	3.9	3,831	272
Total On-Road Construction Trips Genergy Usage									**Gasoline (gal)**	**19,512**		**Diesel (gal)**	**11,103**		**Electricity (kWh)**			**4,881**					

Sheet 4: Average Fuel Efficiency - Los Angeles County

EMFAC2021 Los Angeles County Fuel Efficiency Estimates for 2025

Table 1: 2025 LA County Average Vehicle Fuel Efficiency (Gasoline)

Vehicle Class	Population	Vehicle Miles Travelled Per Day	Gallons Per Day	Miles Per Gallon
HHDT	38.05	2,751.39	663.40	4.15
LDA	3,437,910.93	134,236,067.87	4,538,396.08	29.58
LDT1	314,154.81	11,460,501.61	464,196.61	24.69
LDT2	1,639,958.46	67,471,877.16	2,766,495.91	24.39
LHDT1	126,376.08	5,050,030.71	365,057.86	13.83
LHDT2	19,233.99	720,176.21	59,756.95	12.05
MCY	154,401.15	1,011,349.12	24,450.26	41.36
MDV	982,270.06	37,451,385.03	1,885,979.21	19.86
MH	15,450.11	154,665.78	31,923.55	4.84
MHDT	14,499.00	795,156.39	152,437.67	5.22
OBUS	3,624.48	141,502.82	27,834.50	5.08
SBUS	1,458.98	67,167.50	7,438.11	9.03
UBUS	434.39	30,651.98	6,643.78	4.61
TOTAL	6,709,810.49	258,593,283.58	10,331,273.88	25.03

Table 2: 2025 LA County Average Vehicle Fuel Efficiency (Diesel)

Vehicle Class	Population	Vehicle Miles Travelled Per Day	Gallons Per Day	Miles Per Gallon
HHDT	55,407.54	6,966,404.12	1,135,884.12	6.13
LDA	8,388.61	246,778.38	6,052.72	40.77
LDT1	110.67	2,175.90	94.18	23.10
LDT2	5,270.98	227,598.88	7,061.30	32.23
LHDT1	60,972.67	2,684,490.85	130,343.56	20.60
LHDT2	27,705.40	1,195,933.13	68,740.96	17.40
MCY	0.00	0.00	0.00	0.00
MDV	11,358.20	442,895.33	18,411.21	24.06
MH	5,805.21	61,011.78	6,117.79	9.97
MHDT	62,117.65	2,609,688.38	291,433.63	8.95
OBUS	2,199.54	170,393.83	24,485.41	6.96
SBUS	1,908.77	38,926.17	5,265.44	7.39
UBUS	35.63	5,946.56	926.19	6.42
TOTAL	241280.87	14652243.31	1694816.50	8.65

Table 3: 2025 LA County Average Vehicle Fuel Efficiency (Electricity)

Vehicle Class	Population	Vehicle Miles Travelled Per Day	Energy Consumption (kWh/day)	Miles Per kWh
HHDT	359.75	39,425.69	70,188.26	0.56
LDA	296,571.00	11,983,494.85	4,423,785.90	2.71
LDT1	1,742.36	65,803.51	23,748.04	2.77
LDT2	30,758.00	953,423.20	331,085.75	2.88
LHDT1	1,424.21	99,672.68	55,690.45	1.79
LHDT2	367.73	24,445.62	13,668.26	1.79
MCY	0.00	0.00	0.00	0.00
MDV	25,291.32	795,782.36	287,037.16	2.77
MH	0.00	0.00	0.00	0.00
MHDT	569.80	32,320.07	33,794.02	0.96
OBUS	19.47	1,454.26	1,531.21	0.95
SBUS	27.91	885.12	1,023.46	0.86
UBUS	184.54	17,691.24	37,250.41	0.47
TOTAL	357,316.09	14,014,398.59	5,278,802.91	2.65

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Cor	NOx_RUNI	NOx_IDLE	NOx_STRE	NOx_TOTE	PM2.5_RU	PM2.5_IDL	PM2.5_STI	PM2.5_TO	PM2.5_PM
Los Angele	2025	HHDT	Aggregate	Aggregate	Gasoline	38.05001	2751.395	2751.395	0	761.3047	0	0.019111	0	0.000532	0.019643	4.31E-06	0	9.4E-07	5.25E-06	1.52E-05
Los Angele	2025	HHDT	Aggregate	Aggregate	Diesel	55407.54	6966404	6966404	0	865912	0	13.36348	3.966735	2.687777	20.01799	0.176865	0.00202	0	0.178884	0.068006
Los Angele	2025	HHDT	Aggregate	Aggregate	Electricity	359.7498	39425.69	0	39425.69	4945.954	70188.26	0	0	0	0	0	0	0	0	0.000377
Los Angele	2025	HHDT	Aggregate	Aggregate	Natural Ga	5978.066	376575.2	376575.2	0	38188.68	0	0.317491	0.054337	0	0.371828	0.000888	0.000109	0	0.000997	0.003736
Los Angele	2025	LDA	Aggregate	Aggregate	Gasoline	3337440	1.32E+08	1.32E+08	0	15494312	0	5.779038	0	4.010852	9.78989	0.198287	0	0.032569	0.230856	0.29102
Los Angele	2025	LDA	Aggregate	Aggregate	Diesel	8388.613	246778.4	246778.4	0	34377.62	0	0.058769	0	0	0.058769	0.00662	0	0	0.00662	0.000544
Los Angele	2025	LDA	Aggregate	Aggregate	Electricity	196100.5	9570341	0	9570341	976769.6	3694942	0	0	0	0	0	0	0	0	0.021099
Los Angele	2025	LDA	Aggregate	Aggregate	Plug-in Hył	100470.5	4644988	2231834	2413154	415445.5	728844.4	0.01702	0	0.051084	0.068105	0.003368	0	0.000886	0.004254	0.01024
Los Angele	2025	LDT1	Aggregate	Aggregate	Gasoline	313469	11445443	11445443	0	1380698	0	2.064835	0	0.594694	2.659529	0.028351	0	0.004292	0.032643	0.025233
Los Angele	2025	LDT1	Aggregate	Aggregate	Diesel	110.6655	2175.902	2175.902	0	310.4912	0	0.003625	0	0	0.003625	0.000607	0	0	0.000607	4.8E-06
Los Angele	2025	LDT1	Aggregate	Aggregate	Electricity	1056.524	46083.16	0	46083.16	5037.303	17791.9	0	0	0	0	0	0	0	0	0.000102
Los Angele	2025	LDT1	Aggregate	Aggregate	Plug-in Hył	685.832	34778.58	15058.23	19720.35	2835.915	5956.135	0.000115	0	0.000349	0.000464	1.59E-05	0	4.25E-06	2.01E-05	7.67E-05
Los Angele	2025	LDT2	Aggregate	Aggregate	Gasoline	1623397	67107095	67107095	0	7642462	0	5.125064	0	2.510353	7.635417	0.103721	0	0.01605	0.119771	0.147946
Los Angele	2025	LDT2	Aggregate	Aggregate	Diesel	5270.983	227598.9	227598.9	0	25409.94	0	0.010965	0	0	0.010965	0.001245	0	0	0.001245	0.000502
Los Angele	2025	LDT2	Aggregate	Aggregate	Electricity	14196.35	513053.2	0	513053.2	72319.82	198080.9	0	0	0	0	0	0	0	0	0.001131
Los Angele	2025	LDT2	Aggregate	Aggregate	Plug-in Hył	16561.64	805152.6	364782.6	440370	68482.39	133004.9	0.002784	0	0.008419	0.011203	0.000446	0	0.000119	0.000564	0.001775
Los Angele	2025	LHDT1	Aggregate	Aggregate	Gasoline	126376.1	5050031	5050031	0	1882815	0	0.807319	0.004825	1.228363	2.040507	0.006026	0	0.000607	0.006633	0.011133
Los Angele	2025	LHDT1	Aggregate	Aggregate	Diesel	60972.67	2684491	2684491	0	766959.4	0	3.016251	0.112651	0	3.128902	0.054516	0.001785	0	0.056301	0.008877
Los Angele	2025	LHDT1	Aggregate	Aggregate	Electricity	1424.207	99672.68	0	99672.68	19910.76	55690.45	0	0	0	0	0	0	0	0	0.00022
Los Angele	2025	LHDT2	Aggregate	Aggregate	Gasoline	19233.99	720176.2	720176.2	0	286557.8	0	0.115826	0.000736	0.191884	0.308447	0.00077	0	7.48E-05	0.000845	0.001588
Los Angele	2025	LHDT2	Aggregate	Aggregate	Diesel	27705.4	1195933	1195933	0	348499.1	0	1.193403	0.050596	0	1.243999	0.024538	0.000821	0	0.025358	0.003955
Los Angele	2025	LHDT2	Aggregate	Aggregate	Electricity	367.7308	24445.62	0	24445.62	4876.486	13668.26	0	0	0	0	0	0	0	0	5.39E-05
Los Angele	2025	MCY	Aggregate	Aggregate	Gasoline	154401.2	1011349	1011349	0	308802.3	0	0.593366	0	0.041014	0.63438	0.002393	0	0.001135	0.003528	0.001115
Los Angele	2025	MDV	Aggregate	Aggregate	Gasoline	972359	37248308	37248308	0	4511661	0	4.490618	0	1.95211	6.442728	0.058309	0	0.009755	0.068064	0.082118
Los Angele	2025	MDV	Aggregate	Aggregate	Diesel	11358.2	442895.3	442895.3	0	53411.24	0	0.04384	0	0	0.04384	0.003649	0	0	0.003649	0.000976
Los Angele	2025	MDV	Aggregate	Aggregate	Electricity	15380.31	555450.9	0	555450.9	78334.59	214449.9	0	0	0	0	0	0	0	0	0.001225
Los Angele	2025	MDV	Aggregate	Aggregate	Plug-in Hył	9911.016	443408.4	203076.9	240331.4	40982.05	72587.25	0.00155	0	0.005038	0.006588	0.00028	0	7.98E-05	0.00036	0.000978
Los Angele	2025	MH	Aggregate	Aggregate	Gasoline	15450.11	154665.8	154665.8	0	1545.629	0	0.058711	0	0.000695	0.059406	0.000211	0	6.6E-07	0.000212	0.000511
Los Angele	2025	MH	Aggregate	Aggregate	Diesel	5805.21	61011.78	61011.78	0	580.521	0	0.224124	0	0	0.224124	0.005358	0	0	0.005358	0.000269
Los Angele	2025	MHDT	Aggregate	Aggregate	Gasoline	14499	795156.4	795156.4	0	290095.9	0	0.326459	0.001401	0.132516	0.460376	0.000827	0	0.000146	0.000973	0.00263
Los Angele	2025	MHDT	Aggregate	Aggregate	Diesel	62117.65	2609688	2609688	0	763133.1	0	2.755193	0.848401	1.362225	4.965818	0.030332	0.001462	0	0.031793	0.00863
Los Angele	2025	MHDT	Aggregate	Aggregate	Electricity	569.7995	32320.07	0	32320.07	7696.567	33794.02	0	0	0	0	0	0	0	0	0.000107
Los Angele	2025	MHDT	Aggregate	Aggregate	Natural Ga	941.4552	44260.07	44260.07	0	8065.36	0	0.00516	0.007022	0	0.012182	4.26E-05	1.93E-05	0	6.19E-05	0.000146
Los Angele	2025	OBUS	Aggregate	Aggregate	Gasoline	3624.478	141502.8	141502.8	0	72518.56	0	0.069749	0.000256	0.03184	0.101844	0.00013	0	2.25E-05	0.000152	0.000468
Los Angele	2025	OBUS	Aggregate	Aggregate	Diesel	2199.544	170393.8	170393.8	0	28674.77	0	0.332273	0.038947	0.052965	0.424185	0.006093	4.39E-05	0	0.006136	0.000563
Los Angele	2025	OBUS	Aggregate	Aggregate	Electricity	19.47291	1454.261	0	1454.261	389.6139	1531.212	0	0	0	0	0	0	0	0	4.81E-06
Los Angele	2025	OBUS	Aggregate	Aggregate	Natural Ga	344.247	20322.43	20322.43	0	3063.798	0	0.00314	0.000589	0	0.003729	1.77E-05	1.34E-06	0	1.91E-05	6.72E-05
Los Angele	2025	SBUS	Aggregate	Aggregate	Gasoline	1458.984	67167.5	67167.5	0	5835.934	0	0.033936	0.001458	0.004764	0.040158	7.84E-05	0	3.17E-06	8.15E-05	0.000148
Los Angele	2025	SBUS	Aggregate	Aggregate	Diesel	1908.77	38926.17	38926.17	0	27638.99	0	0.334427	0.065969	0.007807	0.408203	0.001881	7.86E-05	0	0.001959	0.000129
Los Angele	2025	SBUS	Aggregate	Aggregate	Electricity	27.90728	885.1183	0	885.1183	304.7267	1023.463	0	0	0	0	0	0	0	0	2.46E-06
Los Angele	2025	SBUS	Aggregate	Aggregate	Natural Ga	1590.363	38890.52	38890.52	0	23028.46	0	0.03549	0.009172	0	0.044662	0.000177	2.15E-05	0	0.000198	0.000129
Los Angele	2025	UBUS	Aggregate	Aggregate	Gasoline	434.3888	30651.98	30651.98	0	1737.555	0	0.005567	0	0.001421	0.006988	6.04E-05	0	1.43E-06	6.18E-05	9.24E-05
Los Angele	2025	UBUS	Aggregate	Aggregate	Diesel	35.62762	5946.561	5946.561	0	142.5105	0	0.005384	0	0	0.005384	3.86E-05	0	0	3.86E-05	5.89E-05
Los Angele	2025	UBUS	Aggregate	Aggregate	Electricity	184.5436	17691.24	0	17691.24	738.1745	37250.41	0	0	0	0	0	0	0	0	0.000156
Los Angele	2025	UBUS	Aggregate	Aggregate	Natural Ga	3841.049	412283.2	412283.2	0	15364.2	0	0.269263	0	0	0.269263	0.000186	0	0	0.000186	0.003818

PM2.5_PM	PM2.5_TO	PM10_RUI	PM10_IDLI	PM10_STR	PM10_TOT	PM10_PM	PM10_PM	PM10_TOT	CO2_RUNE	CO2_IDLE	CO2_STRE	CO2_TOTE	CH4_RUNE	CH4_IDLE	CH4_STRE	CH4_TOTE	N2O_RUNI	N2O_IDLE	N2O_STRE	N2O_TOTE
9.99E-05	0.00012	4.68E-06	0	1.02E-06	5.71E-06	6.07E-05	0.000285	0.000352	6.244911	0	0.046308	6.291219	0.000402	0	8.71E-08	0.000402	0.000565	0	1.55E-05	0.00058
0.216553	0.463443	0.184862	0.002111	0	0.186973	0.272022	0.618723	1.077718	11951.42	764.2365	0	12715.65	0.004646	0.015338	0	0.019984	1.88295	0.120406	0	2.003356
0.000636	0.001013	0	0	0	0	0.001507	0.001818	0.003324	0	0	0	0	0	0	0	0	0	0	0	0
0.022513	0.027246	0.000965	0.000119	0	0.001084	0.014944	0.064323	0.080351	497.4447	53.33398	0	550.7787	0.548473	0.136448	0	0.68492	0.101407	0.010872	0	0.11228
0.445002	0.966877	0.215655	0	0.035421	0.251077	1.164078	1.271435	2.686589	41105.73	0	1161.806	42267.54	0.380594	0	1.107755	1.488349	0.664471	0	0.53586	1.200331
0.000846	0.008011	0.00692	0	0	0.00692	0.002176	0.002418	0.011514	67.75718	0	0	67.75718	0.000511	0	0	0.000511	0.010675	0	0	0.010675
0.016135	0.037234	0	0	0	0	0.084396	0.046101	0.130497	0	0	0	0	0	0	0	0	0	0	0	0
0.007421	0.021915	0.003663	0	0.000963	0.004626	0.040962	0.021202	0.06679	742.2894	0	29.05298	771.3424	0.002639	0	0.018408	0.021048	0.003086	0	0.009255	0.012341
0.047615	0.105491	0.030834	0	0.004668	0.035503	0.100932	0.136043	0.272477	4266.989	0	129.889	4396.878	0.114578	0	0.161509	0.276087	0.144156	0	0.058661	0.202818
1.03E-05	0.000622	0.000635	0	0	0.000635	1.92E-05	2.96E-05	0.000684	1.05425	0	0	1.05425	3.62E-05	0	0	3.62E-05	0.000166	0	0	0.000166
7.78E-05	0.000179	0	0	0	0	0.000406	0.000222	0.000629	0	0	0	0	0	0	0	0	0	0	0	0
5.57E-05	0.000153	1.73E-05	0	4.62E-06	2.19E-05	0.000307	0.000159	0.000488	5.017103	0	0.210795	5.227898	1.78E-05	0	0.000125	0.000143	2.08E-05	0	6.3E-05	8.38E-05
0.266875	0.534592	0.112806	0	0.017456	0.130262	0.591783	0.7625	1.484546	25405.54	0	702.8745	26108.41	0.252843	0	0.62418	0.877023	0.444501	0	0.293769	0.73827
0.000891	0.002638	0.001301	0	0	0.001301	0.002007	0.002547	0.005856	79.04767	0	0	79.04767	0.00021	0	0	0.00021	0.012454	0	0	0.012454
0.000863	0.001994	0	0	0	0	0.004524	0.002466	0.00699	0	0	0	0	0	0	0	0	0	0	0	0
0.001289	0.003628	0.000485	0	0.000129	0.000613	0.0071	0.003683	0.011396	121.4972	0	5.547672	127.0449	0.000432	0	0.003031	0.003462	0.000504	0	0.001523	0.002026
0.151971	0.169738	0.006554	0	0.00066	0.007214	0.044534	0.434203	0.485951	3392.17	16.37543	53.40038	3461.946	0.02743	0.015493	0.064569	0.107491	0.04563	0.000415	0.102877	0.148922
0.080785	0.145963	0.056981	0.001865	0	0.058847	0.03551	0.230813	0.32517	1450.575	8.555988	0	1459.131	0.011617	0.000343	0	0.01196	0.228539	0.001348	0	0.229887
0.0015	0.001719	0	0	0	0	0.000879	0.004285	0.005164	0	0	0	0	0	0	0	0	0	0	0	0
0.025284	0.027717	0.000838	0	8.13E-05	0.000919	0.006351	0.072241	0.079511	555.8053	2.902085	7.984434	566.6919	0.002816	0.002347	0.009918	0.015081	0.007108	6.11E-05	0.015407	0.022577
0.041988	0.071301	0.025647	0.000858	0	0.026505	0.015819	0.119964	0.162289	763.2884	6.232071	0	769.5205	0.005186	0.000156	0	0.005342	0.120256	0.000982	0	0.121238
0.000429	0.000483	0	0	0	0	0.000216	0.001226	0.001442	0	0	0	0	0	0	0	0	0	0	0	0
0.004682	0.009325	0.002561	0	0.001209	0.00377	0.004459	0.013378	0.021607	216.5138	0	15.35491	231.8687	0.191751	0	0.054692	0.246443	0.042301	0	0.002489	0.044791
0.151607	0.301789	0.063415	0	0.010609	0.074025	0.328474	0.433162	0.835661	17302.8	0	510.7617	17813.57	0.202572	0	0.460906	0.663478	0.336737	0	0.192837	0.529575
0.001797	0.006423	0.003814	0	0	0.003814	0.003906	0.005135	0.012855	206.1042	0	0	206.1042	0.000391	0	0	0.000391	0.032472	0	0	0.032472
0.000934	0.002159	0	0	0	0	0.004898	0.00267	0.007568	0	0	0	0	0	0	0	0	0	0	0	0
0.00071	0.002047	0.000305	0	8.68E-05	0.000391	0.00391	0.002028	0.006329	67.60796	0	4.093913	71.70187	0.000238	0	0.001798	0.002036	0.000276	0	0.000896	0.001172
0.002595	0.003319	0.00023	0	7.18E-07	0.00023	0.002046	0.007415	0.009691	302.6868	0	0.053213	302.74	0.00197	0	6.22E-05	0.002032	0.003783	0	7.64E-05	0.003859
0.001018	0.006645	0.005601	0	0	0.005601	0.001076	0.002907	0.009584	68.48556	0	0	68.48556	0.000198	0	0	0.000198	0.01079	0	0	0.01079
0.013353	0.016956	0.000899	0	0.000159	0.001058	0.010518	0.038153	0.049729	1422.518	8.613037	14.47832	1445.609	0.008793	0.004211	0.014621	0.027624	0.017016	0.00012	0.010455	0.027591
0.043889	0.084313	0.031703	0.001528	0	0.033231	0.03452	0.125399	0.19315	3111.839	150.6142	0	3262.453	0.00246	0.00071	0	0.003169	0.490271	0.023729	0	0.514001
0.000272	0.000378	0	0	0	0	0.000428	0.000776	0.001203	0	0	0	0	0	0	0	0	0	0	0	0
0.000742	0.00095	4.63E-05	2.1E-05	0	6.73E-05	0.000585	0.00212	0.002773	41.30163	5.714391	0	47.01603	0.026124	0.018793	0	0.044917	0.00842	0.001165	0	0.009585
0.002406	0.003026	0.000141	0	2.45E-05	0.000166	0.001872	0.006874	0.008912	259.9607	1.509467	2.492155	263.9623	0.001707	0.000773	0.002779	0.00526	0.003349	2.07E-05	0.002375	0.005745
0.004389	0.011089	0.006368	4.58E-05	0	0.006414	0.002254	0.012539	0.021207	265.7228	8.378956	0	274.1018	0.000484	0.00014	0	0.000624	0.041865	0.00132	0	0.043185
1.24E-05	1.72E-05	0	0	0	0	1.92E-05	3.53E-05	5.46E-05	0	0	0	0	0	0	0	0	0	0	0	0
0.000346	0.000432	1.93E-05	1.46E-06	0	2.07E-05	0.000269	0.000988	0.001277	19.67778	0.456024	0	20.1338	0.012387	0.001678	0	0.014066	0.004011	9.3E-05	0	0.004104
0.001214	0.001444	8.52E-05	0	3.44E-06	8.87E-05	0.000592	0.003468	0.004149	66.0107	4.167245	0.359722	70.53766	0.000892	0.003915	0.000444	0.005251	0.001898	0.000133	0.000426	0.002457
0.000704	0.002791	0.001966	8.22E-05	0	0.002048	0.000515	0.00201	0.004573	54.11352	4.83043	0	58.94395	0.000286	1.62E-05	0	0.000302	0.008526	0.000761	0	0.009287
8E-06	1.05E-05	0	0	0	0	9.85E-06	2.29E-05	3.27E-05	0	0	0	0	0	0	0	0	0	0	0	0
0.000703	0.00103	0.000192	2.34E-05	0	0.000216	0.000514	0.002008	0.002738	72.62277	7.267871	0	79.89064	0.197359	0.025903	0	0.223261	0.014805	0.001482	0	0.016286
0.001241	0.001395	6.56E-05	0	1.55E-06	6.72E-05	0.00037	0.003546	0.003983	62.82422	0	0.180566	63.00479	0.000172	0	0.000184	0.000356	0.000544	0	0.000139	0.000683
0.000252	0.00035	4.03E-05	0	0	4.03E-05	0.000235	0.000721	0.000997	10.36824	0	0	10.36824	3.18E-05	0	0	3.18E-05	0.001634	0	0	0.001634
0.000375	0.000531	0	0	0	0	0.000623	0.001071	0.001694	0	0	0	0	0	0	0	0	0	0	0	0
0.017477	0.021481	0.000195	0	0	0.000195	0.01527	0.049933	0.065398	1157.734	0	0	1157.734	1.342036	0	0	1.342036	0.236012	0	0	0.236012

ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_TOTE	ROG_DIUR	ROG_HOTS	ROG_RUNI	ROG_TOTA	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_TOTE	TOG_DIUR	TOG_HOTS	TOG_RUNI	TOG_TOTA	CO_RUNE	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNE
0.002164	0	4.5E-07	0.002165	0.000288	7.81E-05	0.000659	0.00319	0.003158	0	4.93E-07	0.003159	0.000288	7.81E-05	0.000659	0.004184	0.118084	0	0.0042	0.122284	6.17E-05
0.100026	0.330224	0	0.43025	0	0	0	0.43025	0.113872	0.375935	0	0.489807	0	0	0	0.489807	0.580501	4.81698	0	5.397481	0.113173
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.014318	0.00226	0	0.016578	0	0	0	0.016578	0.567141	0.139608	0	0.706749	0	0	0	0.706749	3.318507	0.403631	0	3.722138	0
1.435287	0	4.968492	6.40378	5.434478	1.555017	3.932021	17.3253	2.094368	0	5.439874	7.534242	5.434478	1.555017	3.932021	18.45576	113.4391	0	48.7868	162.2259	0.406372
0.011007	0	0	0.011007	0	0	0	0.011007	0.01253	0	0	0.01253	0	0	0	0.01253	0.120742	0	0	0.120742	0.000642
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00833	0	0.074668	0.082998	0.05166	0.019131	0.016951	0.17074	0.012155	0	0.081752	0.093907	0.05166	0.019131	0.016951	0.181649	1.211741	0	0.56809	1.77983	0.007338
0.511303	0	0.832215	1.343517	1.082442	0.288068	0.812862	3.526889	0.746092	0	0.91117	1.657262	1.082442	0.288068	0.812862	3.840634	23.10933	0	8.018267	31.12759	0.042184
0.000779	0	0	0.000779	0	0	0	0.000779	0.000887	0	0	0.000887	0	0	0	0.000887	0.004254	0	0	0.004254	9.99E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.63E-05	0	0.000509	0.000566	0.00022	7.61E-05	6.36E-05	0.000925	8.22E-05	0	0.000558	0.00064	0.00022	7.61E-05	6.36E-05	0.001	0.008207	0	0.003876	0.012083	4.96E-05
0.990602	0	2.830958	3.82156	2.47152	0.662437	1.781084	8.736601	1.445484	0	3.099543	4.545027	2.47152	0.662437	1.781084	9.460068	66.90711	0	27.08808	93.99519	0.25116
0.004511	0	0	0.004511	0	0	0	0.004511	0.005136	0	0	0.005136	0	0	0	0.005136	0.04314	0	0	0.04314	0.000749
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001364	0	0.012303	0.013667	0.005815	0.001977	0.001732	0.023191	0.001991	0	0.01347	0.015461	0.005815	0.001977	0.001732	0.024985	0.198591	0	0.093591	0.292183	0.001201
0.136403	0.055276	0.31193	0.503609	0.381271	0.094966	0.527062	1.506908	0.199039	0.080658	0.341524	0.621221	0.381271	0.094966	0.527062	1.62452	5.514747	0.523197	6.484761	12.52271	0.033535
0.250111	0.007377	0	0.257488	0	0	0	0.257488	0.284735	0.008398	0	0.293133	0	0	0	0.293133	0.653186	0.061145	0	0.714331	0.013745
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.013055	0.008443	0.047945	0.069443	0.060311	0.014613	0.07983	0.224198	0.01905	0.01232	0.052494	0.083864	0.060311	0.014613	0.07983	0.238619	0.608964	0.079774	0.955352	1.64409	0.005495
0.111657	0.003352	0	0.115009	0	0	0	0.115009	0.127114	0.003816	0	0.13093	0	0	0	0.13093	0.267096	0.027784	0	0.29488	0.007233
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.231673	0	0.402642	1.634315	0.669343	1.227521	1.253307	4.784486	1.494892	0	0.437836	1.932728	0.669343	1.227521	1.253307	5.082899	13.68766	0	2.500537	16.1882	0.00214
0.849195	0	2.259206	3.1084	1.912038	0.482895	1.409587	6.91292	1.238822	0	2.473543	3.712366	1.912038	0.482895	1.409587	7.516885	45.43667	0	17.63462	63.07129	0.171056
0.008417	0	0	0.008417	0	0	0	0.008417	0.009582	0	0	0.009582	0	0	0	0.009582	0.14057	0	0	0.14057	0.001953
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000759	0	0.007363	0.008122	0.003719	0.00132	0.001113	0.014274	0.001108	0	0.008062	0.009169	0.003719	0.00132	0.001113	0.015321	0.11047	0	0.056016	0.166486	0.000668
0.008542	0	0.00025	0.008792	0.073156	0.018854	0.000434	0.101235	0.012464	0	0.000274	0.012738	0.073156	0.018854	0.000434	0.105182	0.245612	0	0.005555	0.251167	0.002992
0.004256	0	0	0.004256	0	0	0	0.004256	0.004846	0	0	0.004846	0	0	0	0.004846	0.017559	0	0	0.017559	0.000649
0.042396	0.016066	0.078294	0.136756	0.044693	0.010539	0.082606	0.274593	0.061864	0.023444	0.085722	0.17103	0.044693	0.010539	0.082606	0.308867	1.089625	0.229907	1.644538	2.964071	0.014063
0.052954	0.015277	0	0.068231	0	0	0	0.068231	0.060285	0.017391	0	0.077676	0	0	0	0.077676	0.231314	0.504739	0	0.736053	0.029467
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000373	0.000269	0	0.000642	0	0	0	0.000642	0.026662	0.01918	0	0.045842	0	0	0	0.045842	0.112314	0.03699	0	0.149304	0
0.00832	0.002973	0.014857	0.02615	0.012643	0.002993	0.013915	0.055701	0.01214	0.004338	0.016267	0.032745	0.012643	0.002993	0.013915	0.062296	0.210426	0.023019	0.30397	0.537416	0.00257
0.010428	0.003016	0	0.013443	0	0	0	0.013443	0.011871	0.003433	0	0.015304	0	0	0	0.015304	0.040516	0.045627	0	0.086143	0.002516
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000177	2.4E-05	0	0.000201	0	0	0	0.000201	0.012642	0.001713	0	0.014355	0	0	0	0.014355	0.057604	0.002482	0	0.060087	0
0.004418	0.017076	0.002551	0.024045	0.003615	0.000872	0.002326	0.030858	0.006446	0.024917	0.002793	0.034156	0.003615	0.000872	0.002326	0.040969	0.087446	0.132029	0.057944	0.277419	0.000653
0.006156	0.000349	0	0.006506	0	0	0	0.006506	0.007009	0.000397	0	0.007406	0	0	0	0.007406	0.01486	0.006683	0	0.021543	0.000512
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00282	0.00037	0	0.00319	0	0	0	0.00319	0.201419	0.026436	0	0.227855	0	0	0	0.227855	0.677082	0.040045	0	0.717127	0
0.000562	0	0.000778	0.00134	0.000207	6.17E-05	0.00018	0.001788	0.000819	0	0.000852	0.001672	0.000207	6.17E-05	0.00018	0.00212	0.011944	0	0.016123	0.028067	0.000621
0.000684	0	0	0.000684	0	0	0	0.000684	0.000778	0	0	0.000778	0	0	0	0.000778	0.000897	0	0	0.000897	9.82E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.019352	0	0	0.019352	0	0	0	0.019352	1.36984	0	0	1.36984	0	0	0	1.36984	18.77605	0	0	18.77605	0

SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNI	Fuel Consumption
0	4.58E-07	6.22E-05	0.000135	0.663401
0.007237	0	0.12041	1.657952	1135.884
0	0	0	0	0
0	0	0	0.326013	63.66162
0	0.011486	0.417858	5.176939	4457.059
0	0	0.000642	0.000843	6.052722
0	0	0	0	0
0	0.000287	0.007626	0.097261	81.33709
0	0.001284	0.043468	0.482047	463.6453
0	0	9.99E-06	7.44E-06	0.094176
0	0	0	0	0
0	2.08E-06	5.17E-05	0.000697	0.551275
0	0.006949	0.258108	2.80425	2753.099
0	0	0.000749	0.000778	7.061297
0	0	0	0	0
0	5.48E-05	0.001256	0.016872	13.39673
0.000162	0.000528	0.034225	0.250016	365.0579
8.11E-05	0	0.013826	0.55676	130.3436
0	0	0	0	0
2.87E-05	7.89E-05	0.005602	0.035703	59.75695
5.91E-05	0	0.007292	0.252847	68.74096
0	0	0	0	0
0	0.000152	0.002292	0.009923	24.45026
0	0.005049	0.176105	1.53653	1878.418
0	0	0.001953	0.001513	18.41121
0	0	0	0	0
0	4.05E-05	0.000709	0.009402	7.560872
0	5.26E-07	0.002993	0.007643	31.92355
0	0	0.000649	0.010863	6.117788
8.51E-05	0.000143	0.014291	0.039434	152.4377
0.001426	0	0.030893	0.609523	291.4336
0	0	0	0	0
0	0	0	0.051716	5.434335
1.49E-05	2.46E-05	0.00261	0.007015	27.8345
7.93E-05	0	0.002596	0.039621	24.48541
0	0	0	0	0
0	0	0	0.023746	2.327161
4.12E-05	3.56E-06	0.000697	0.003332	7.438109
4.57E-05	0	0.000558	0.004215	5.26544
0	0	0	0	0
0	0	0	0.045442	9.234139
0	1.79E-06	0.000623	0.00152	6.643776
0	0	9.82E-05	0.001442	0.926191
0	0	0	0	0
0	0	0	0.44083	133.8164

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Environmental Geotechnology Laboratory, Inc.

May 19, 2023

Longo Investment Inc.
812-A S. Atlantic Boulevard,
Monterey Park, California 91754

Subject: **Change of Consultant and Report of Geotechnical Engineering Investigation, Proposed 65-Unit Condominium and Associated Structures, 338 – 410 South Alhambra Avenue, Monterey Park, California, 91755; APN: 5259-004-036, 037 and 038, EGL Project No.: 23-227-002GE**

Ladies and Gentlemen:

Herewith is a formal notification that Environmental Geotechnology Laboratory, Inc. (EGL) is now to be considered the geotechnical consultant of record for the above subject project. EGL has reviewed the referenced soil report (Cal Land Engineering. Inc., 2016; Reference #3) and concurs in general with the findings, conclusions and recommendations, and is satisfied with the work performed from a geotechnical engineering standpoint. Based on the information provided to EGL and the current tentative map by EGL Associates, Inc.; Reference #9) the proposed development has been changed. The following should be considered in the design phase of the proposed structures and except for changes made herein, all other conclusions and recommendations in the referenced report remain valid and applicable. Purpose of this report was to evaluate the subsurface conditions and provide recommendations for foundation designs and other relevant parameters for the proposed construction.

Based on the findings and observations during our investigation, it is concluded that the subject site is suitable for its intended use from the geotechnical engineering viewpoint, provided that recommendations set forth herein are followed.

This opportunity to be of service is sincerely appreciated. If you have any questions pertaining to this report, please call the undersigned.

Respectfully submitted,

Environmental Geotechnology Laboratory, Inc.

Ryan Jones, GE 2852
Senior Engineer

Dist: (4) Addressee
RJ/ky

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REPORT OF GEOTECHNICAL ENGINEERING INVESTIGATION

Proposed 65-Unit Condominium and Associated Structures

At

APN: 5259-004-036, 037 and 038

338 – 410 S. Alhambra Avenue
Monterey Park, California, 91755

Prepared by
ENVIRONMENTAL GEOTECHNOLOGY LABORATORY, INC.
Project No.: 23-227-002GE
May 19, 2023

TABLE OF CONTENT

1.0 INTRODUCTION

1.1 Purpose

This report presents a summary of our preliminary geotechnical engineering investigation for the proposed residential development at 338 – 410 South Alhambra Avenue, Monterey Park, California (APN: 5259-004-036, 037 and 038). Approximate regional location is shown on the attached Site (Location) Map, Figure 1. The purposes of this investigation were to evaluate the subsurface conditions at the area of proposed construction and to provide recommendations pertinent to grading, foundation design and other relevant parameters of the proposed development.

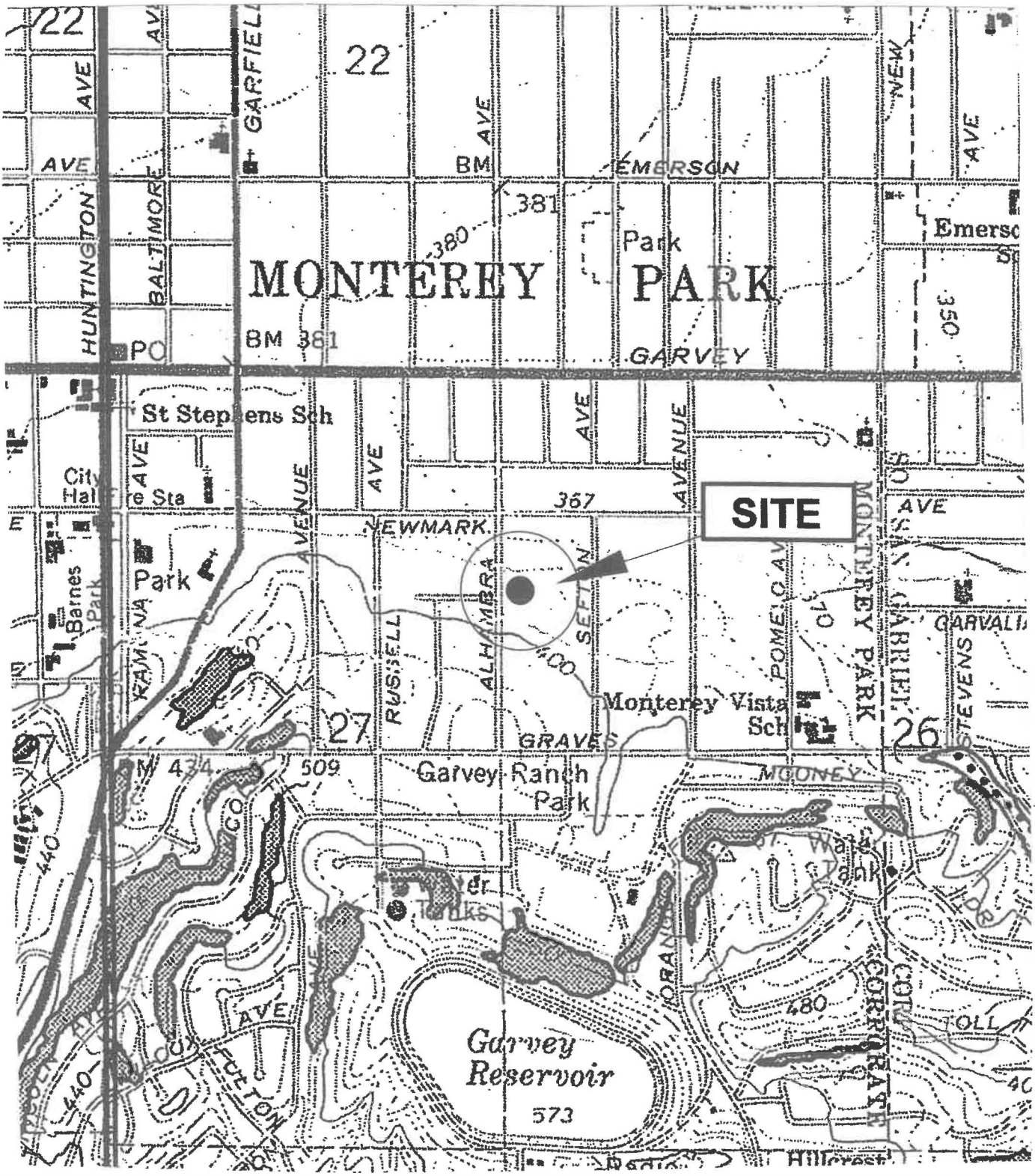
1.2 Scope of Services

Our scope of services included the followings:

- Review available soil data of vicinity area and previous geotechnical investigation reports, including the "Report of Geotechnical Engineering Investigation" by Cal Land Engineering (2016).
- Subsurface exploration consisting of logging and sampling of three (3) 8-inch diameter hand auger borings. The borings were drilled to a maximum depth of 15 feet below the existing ground surface. The boring logs are presented in Appendix A.
- Perform laboratory testing on representative onsite samples to establish soil-engineering characteristics. Field moisture and density are presented on boring logs in Appendix A. Laboratory test results are presented in Appendix B.
- Engineering analyses of the geotechnical data obtained from our background studies, field investigation, and laboratory testing.
- Perform one (1) percolation test on boring HB-1 at a depth of approximately 8 feet to determine the design infiltration rate of the soil at the site. Percolation test results are presented in Appendix C.
- Preparation of this report presenting our findings, conclusions, and recommendations for the proposed construction.

1.3 Site Conditions

The subject site is bounded on the westerly by South Alhambra Avenue, and located easterly of the intersection of the South Alhambra Avenue and Peach Street in the City of Monterey Park, County of Los Angeles, California. The project site consists of three lots (APN: 5259-004-036, 037 and 038) and currently occupied by multi-unit residential buildings and associated



Note: Map modified from "Seismic Hazard Zones, El Monte Quadrangle" and "Seismic Hazard Zones, Los Angeles Quadrangle" by California Department of Conservation, Division of Mines and Geology.

Approximate Scale: 1" = 1000'

Potential Liquefaction Area

Potential Earthquake-Induced Landslide Areas

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address:
338 - 410 S. Alhambra Avenue
Monterey Park, California

SITE LOCATION MAP

05/23

Figure 1

structures. Topographically, the subject site is relatively flat and gently descends to the northeast. The elevation difference between the southwesterly and northeasterly property corners of the subject site is approximately 12 feet. Detailed configuration of the site is shown on the Site Plan, Figure 2.

1.4 Proposed Construction

Based on the *Tentative Map* provided by EGL Associated Inc. (2023), it is our understanding that the existing multi-unit residential buildings and associated structures are to be completely demolished and removed. It is our understanding that the proposed development at the site consists of 65-unit condominiums and associated structures. The proposed buildings are anticipated to be three and/or four-story wood frame structures with concrete slab-on-grade. Column loads are unknown at this time, but are expected to be light to medium. Cut/fill grading operation is anticipated to achieve the desired grades.

2.0 FIELD EXPLORATION AND LABORATORY TESTING

2.1 Field Exploration

EGL preformed field subsurface exploration on May 3, 2023 with the aid of hand laborers equipped with hand tools. A total of three (3) 8-inch diameter hand auger borings were drilled to a maximum depth of 15 feet below the existing ground surface. Approximate locations of these borings are shown on the Site Plan, Figure 2. Upon completion of drilling and percolation testing, all borings were backfilled with onsite soil cuttings removed from excavations and tamped. The purpose of the excavation was to investigate the engineering characteristics of the onsite soils with respect to the proposed residential development.

EGL's field engineer, who continuously logged all borings, visually classified the soils in accordance with the Unified Soil Classification System and supervised the drilling operations. Relatively undisturbed ring samples and bulk samples were collected during drilling for laboratory testing. Ring samples were taken at frequent intervals. The samples, taken by hand tools, were obtained by driving a split-tube ring sampler with successive blows of a 32-pound hammer dropping from a height of 48". Exploratory boring logs are presented in Appendix A.

2.2 Laboratory Testing

Representative samples were tested for the following parameters: in-situ moisture content and density, direct shear strength, consolidation, corrosion potential and expansion index. The

LEGEND

B-1 Approximate Location of Hollow Stem Auger Boring No. 1 (CLE, 2016)

HB-1 Approximate Location of Hand Auger Boring No. 1 (EGL, 2023)

PEACH ℄ STREET

AVENUE

ALHAMBRA

℄

N 89°46'05" E 297.19'

N 89°45'55" E 296.65'

N 00°24'55" W 254.07'

N 00°17'05" W 254.07'

EX. 4" WATER MAIN

EX. 8" SEWER MAIN ON STREET CENTERLINE

EX. OAK TREE TO BE REMOVED

B-1

B-2

HB-1

HB-2

HB-3

LOBBY

ELECT. ROOM

FIRE COUNT ROOM

ELEVATOR

UNIT 101 FF 390.00

UNIT 102 FF 390.00

UNIT 103 FF 390.00

UNIT 104 FF 390.00

UNIT 105 FF 390.00

UNIT 106 FF 390.00

UNIT 107 FF 390.00

UNIT 108 FF 390.00

DRIVEWAY

EX LOT LINE

LOT 1

PARKING P.S 389.00

LOT 1 - 1ST FLOOR PARKING SPACE: 83

NORTH

SCALE : 1"=30'-0"

Environmental Geotechnology Laboratory, Inc.

Project Address:
338-410 S. Alhambra Avenue
Monterey Park, California
EGL Project No. 23-227-002GE

Site Plan

5/19/2023

FIGURE 2

results of our laboratory testing along with a summary of the testing procedures are presented in Appendix B. In-situ moisture and density test results are provided on the boring logs (Appendix A).

2.3 Previous Investigation

Cal Land Engineering (2016) was the previous geotechnical engineering for the subject property. Cal Land Engineering performed the initial subsurficial exploration with two (2) 8"-diameter hollow stem auger borings to a maximum depth of 50.5 feet below existing grade. Copies of the site plan, exploratory logs and laboratory testing are attached in Appendix D, Previous Investigations. Approximate locations of the borings are presented on the Site Plan, Figure 2.

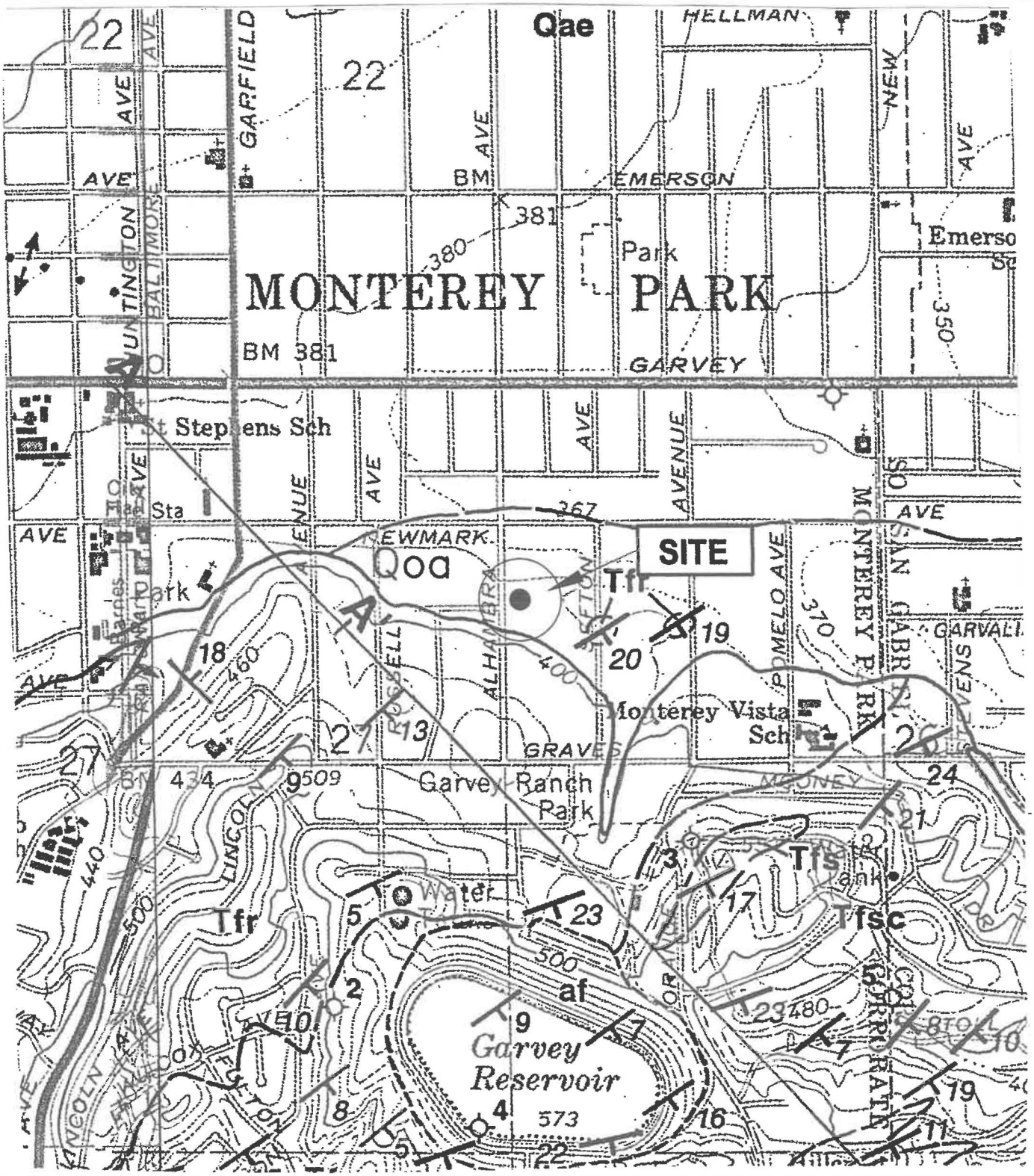
3.0 SUMMARY OF GEOTECHNICAL CONDITIONS

3.1 Soil Conditions

Our subsurface exploration and testing program revealed the existence of natural soil to the maximum explored depth of 15.0 feet. The onsite soils consist predominantly of dark yellowish brown to yellowish brown sandy clay (CL). In general, our borings encountered dark yellowish brown, slightly moist to very moist, and firm to stiff sandy clay (CL) to a depth of approximately 3.0 feet. Below this, our deep boring HB-2 encountered layers of dark yellowish brown to yellowish brown, slightly moist to very most, and very stiff to hard sandy clay (CL) to the maximum explored depth of 15.0 feet below the existing ground surface. Below 15' the borings by CalLand encountered silty sandy clay (CL) material to the depths explored, 50.5'. Based on Dibblee (2001), the site is underlain by uplifted remnants of alluvial sand and gravel, north of hill areas (Qoa; see Figure 3).

3.2 Groundwater

Static ground water levels were not encountered during our subsurface investigation to the maximum explored depth of 15 feet below the existing ground surface. However, perched water was encountered within our borings HB-2 and HB-3 at depths of approximately 8 feet and 10 feet, respectively during our subsurface investigation. Based on the historically high groundwater depth map prepared by CDMG Seismic Hazard Zone Report 024 the historic groundwater is approximately greater than 50 feet below ground surface at the subject site (High Ground Water Map El Monte Quadrangle). Groundwater is not expected to be a significant constraint during the near surface construction. However, groundwater may be a significant constraint during raining season when high perched water may occur.



Map modified from Geologic Map of the "El Monte and Los Angeles Quadrangle" by Thomas W. Dibblee, Jr.

Note:

Approximate Scale: 1" = 1000'

Qoa: Older Dissected Surficial Sediments: uplifted remants of alluvial sand and gravel, north of hill areas.

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address:
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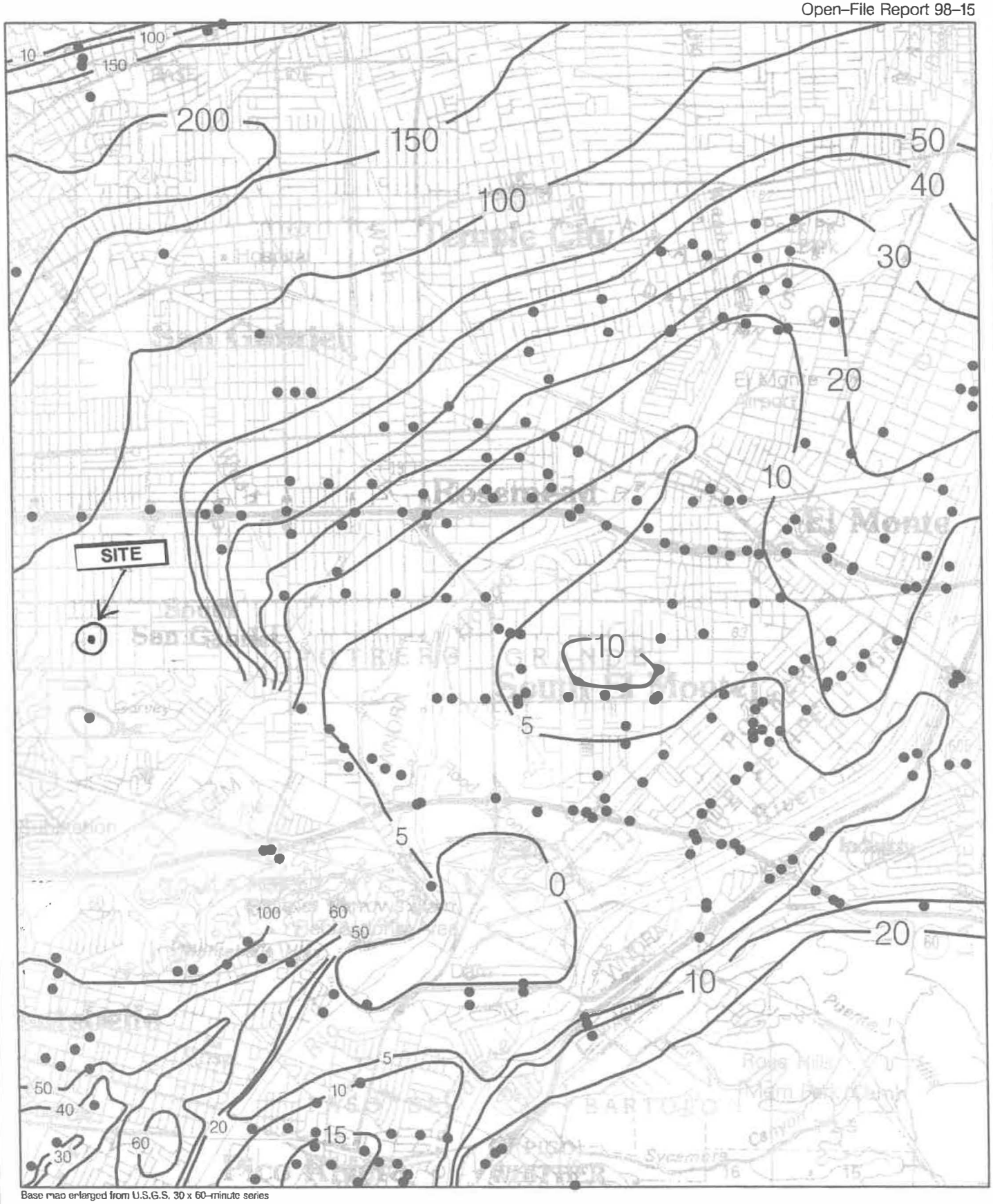
Monterey Park, California

REGIONAL GEOLOGY MAP

05/23

Figure 3



Base map enlarged from U.S.G.S. 30 x 60-minute series

Plate 1.2 Historically Highest Ground Water Contours and Borehole Log Data Locations, El Monte Quadrangle.

● Borehole Site

30 Depth to ground water in feet

ONE MILE

SCALE

4.0 CONCLUSIONS

Based on the results of our subsurface investigation, it is our opinion that the proposed construction is feasible from a geotechnical standpoint, provided the recommendations contained herein are incorporated in the design and construction. The following is a summary of the geotechnical design and construction factors that may affect the development of the site:

4.1 Seismicity

Our studies of regional and local seismicity indicate that there are no known active faults crossing the property. However, the site is located in a seismically active region and is subject to seismically induced ground shaking from nearby and distant faults, which is a characteristic of all Southern California communities.

4.2 Seismic Induced Hazards

Based on our review of the "Seismic Hazard Zones, El Monte Quadrangle" by California Department of Conservation, Division of Mines and Geology, it is concluded that the site is located outside the mapped potential liquefaction areas. It is our understanding that a liquefaction study is not required by the city for the subject site.

4.3 Excavatability

Based on our subsurface investigation, excavation of the subsurface materials should be accomplished with conventional earthwork equipment.

4.4 Surficial Soil Removal and Recompaction

Based on our investigation, it is concluded that the existing surficial soils may not be suitable for structure support as they presently exist and will require remedial grading as discussed herein.

4.5 Groundwater

Static ground water levels were not encountered during our subsurface investigation to the maximum explored depth of 15 feet below the existing ground surface. However, perched water was encountered within our borings HB-2 and HB-3 at depths of approximately 8 feet and 10 feet, respectively during our subsurface investigation. Based on the historically high groundwater depth map prepared by CDMG Seismic Hazard Zone Report 024 the historic groundwater is approximately greater than 50 feet below ground surface at the subject site (High Ground Water

Map El Monte Quadrangle). Groundwater is not expected to be a significant constraint during the near surface construction. However, groundwater may be a significant constraint during raining season when high perched water may occur.

5.0 RECOMMENDATIONS

Based on the subsurface conditions exposed during field investigation and laboratory testing program, it is recommended that the following recommendations be incorporated in the design and construction phases of the project.

5.1 Grading

5.1.1 Site Preparation

Prior to initiating grading operations, any existing vegetation, trash, debris, over-sized materials (greater than 6 inches), and other deleterious materials within construction areas should be removed from the subject site.

5.1.2 Surficial Soil Removals

No detailed grading plan was available at the time of preparing this report however, based on our field exploration and laboratory data obtained to date, it is recommended that the surficial soils be removed to a depth of at least 4 feet below existing grade or 2 feet below the bottom of the footing, whichever is deeper. The recommended removal should be extended at least 4 feet beyond proposed building lines. Existing near surface soils should also be removed at least one foot within proposed concrete slab and driveway areas. The construction areas should be excavated and then observed by a representative of this office to verify the soil conditions for any potential needs of removal of loose soils and replacement with compacted fill. This may also be necessary due to difference in expansion characteristics of foundation materials beneath a structure.

During the grading of the proposed building pads sandy import material (EI < 20) should be used within the top 12 inches. EGL should provide inspections to verify import soils are non-expansive.

Locally deeper removals may be necessary to expose competent natural ground. The actual removal depths should be determined in the field as conditions are exposed. Visual inspection and/or testing may be used to define removal requirements.

5.1.3 Treatment of Removal Bottoms

Soils exposed within areas approved for fill placement should be scarified to a depth of 12 inches, conditioned to near optimum moisture content, then compacted in-place to minimum project standards.

5.1.4 Structural Backfill

The onsite soils may be used as compacted fill, provided they are free of organic materials and debris. During the grading sandy import material (EI < 20) should be used within the top 12 inches of the pads. Soils imported from off-site sources should be sandier than the onsite soils and should be approved by the Soil Engineer prior to transporting to the site. Fills should be placed in relatively thin lifts, brought to near optimum moisture content, then compacted to obtain at least 90 percent relative compaction based on laboratory standard ASTM D-1557-12.

5.2 Shallow Foundation Design

5.2.1 Bearing Value

An allowable bearing value of 1,800 pounds per square foot (psf) may be used for design of the footings placed at a depth of at least 18 inches below the lowest adjacent ground and founded on the new certified compacted fill. Single spread footings should be at least 24 inches square and continuous footings should be at least 12 inches wide. This bearing value may be increased by 200 psf for each additional foot of depth or width to a maximum value of 3500 psf. The above recommended value may be increased by one third (1/3) when considering short duration seismic or wind loads.

5.2.2 Settlement

Settlement of the footings placed as recommended and subject to no more than allowable loads is not expected to exceed 3/4 inch. Differential settlement between adjacent columns is not anticipated to exceed 1/2 inch for a span of 30 feet or less.

5.2.3 Lateral Pressures

Passive earth pressure may be computed as an equivalent fluid pressure of 300 pcf, with a maximum earth pressure of 2500 psf. An allowable coefficient of friction between soil and concrete of 0.35 may be used with the dead load forces. When combining passive pressure and frictional resistance, the passive pressure component should be reduced by one third (1/3).

Active earth pressure from horizontal backfill may be computed as an equivalent fluid weighting of 35 pounds per cubic foot for the design of cantilevered walls. Active earth pressure from 2:1 (H:V) backfill may be computed as an equivalent fluid weighting of 55 pcf for the design of cantilevered walls. For cantilever (unrestrained) walls greater than 6' with level backfill, an additional seismic lateral force of $13H^2$ plf should be applied at 0.37H from the base of the wall (H = retained height). Where the slope of the backfill is 2:1 or flatter, an additional seismic lateral force of $22H^2$ plf should be applied at 0.37H from the base of the wall (H = retained height). The above values assume free-draining conditions.

5.3 Foundation Construction

It is anticipated that the entire structure will be underlain by onsite soils of medium expansion potential. The following presented our recommendations for the foundation construction.

All footings should be founded at a minimum depth of 18 inches below the lowest adjacent ground surface and founded into new certified compacted fill. All continuous footings should have at least two No. 4 reinforcing bar placed both at the top and two No. 4 reinforcing bar placed at the bottom of the footings. A grade beam of at least 12 inches square, reinforced as recommended above for footings, should be utilized across the garage entrance. Base of the reinforced beam should be at the same elevation as the bottom of the adjoining footings.

5.4 Concrete Slab

Concrete slabs should be a minimum of 4 inches thick, underlain with 2 inches of sand and reinforced with a minimum of #3 rebar spaced at 18" on center each way, or its equivalent. All slab reinforcement should be supported to ensure proper positioning during placement of concrete. Garage slabs should be poured separately from footings. A positive separation should be maintained with expansive joint material to permit relative movement. Concrete slabs in moisture sensitive areas should be underlain with a vapor barrier consisting of a minimum of six-mil polyethylene membrane with all laps sealed. A minimum of two inches of sand should be placed over the membrane to aid in uniform curing of concrete.

5.5 Retaining Wall

Walls should be provided with subdrains to reduce the potential for the buildup of hydrostatic pressure. Backdrains could consist of free drainage materials (SE of 30 or greater) or CalTran Class 2 permeable materials immediately behind the wall and extending to within 18 inches of

the ground surface. A 4-inch diameter perforated pipe wrapped in gravel and geofabric should be installed at the base of the backdrain and sloped to discharge to a suitable collection facility or through weep holes. Alternatively, commercially available drainage fabric could be used. The fabric manufacturer's recommendations should be followed in the installation of the drainage fabric backdrain.

5.6 Temporary Excavation and Backfill of Utility Trench

All trench excavations should conform to CAL-OSHA and local safety codes. All utilities trench backfill should be brought to near optimum moisture content and then compacted to obtain a minimum relative compaction of 90 percent of ASTM D-1557-12. All temporary excavations should be observed by a field engineer of this office so as to evaluate the suitability of the excavation to the exposed soil conditions.

6.0 SEISMIC DESIGN

Based on our studies on seismicity, there are no known active faults crossing the property. However, the subject site is located in Southern California, which is a tectonically active area. The following CBC 2022 (Chapter 16) & ASCE 7-16 seismic related values may be used:

Site Classification: (ASCE, Table 20.3-1)	D
Spectral Response Accelerations (g):	
(CBC, Figure 1613.2.1 (1) 0.2-Second, S_S	1.958
(CBC, Figure 1613.2.1 (3)) 1-Second, S_1	0.705
Site Coefficient:	
(CBC, Table 1613.2.3 (1)) F_a	1.0
(CBC, Table 1613.2.3 (2)) F_v	1.7

Based on the U.S. Seismic Design Maps (SEAOC & OSHPD, 2022), the proposed structures may be designed to accommodate up to a site modified horizontal acceleration of 0.931g with 2% probability of being exceeded in 50 years. However, Project Structural Engineer should be aware of the information provided to determine if any additional structural strengthening is warranted.

7.0 CORROSION POTENTIAL

Chemical laboratory tests were conducted on the existing onsite near surface materials sampled during EGL's field investigation to aid in evaluation of soil corrosion potential and the attack on concrete by sulfate in the soils. The test results are presented in the Appendix B.

According to ACI 318-14 Table 19.3.1.1, a sulfate content of 0.002 percent by weight in soils is assigned to Class "S0" and the severity of exposure to sulfate for concrete placed in contact with the onsite soil is considered "Not Applicable". Based on the testing results and ACI 318-14 Table 19.3.2.1, it is concluded that there is no restriction on the type of cement ("No Type Restriction") to be used at the site; however EGL recommends that Type II cement be used.

Based on the minimum resistivity test results, the subsurface soils are corrosive to buried metal pipe. Any underground steel utilities should be blasted and given protective coating. Should additional protective measures be warranted, a corrosion specialist should be consulted.

8.0 INSPECTION

As a necessary requisite to the use of this report, the following inspection is recommended:

- Temporary excavations.
- Removal of surficial and unsuitable soils.
- Backfill placement and compaction.
- Utility trench backfill.
- Foundation excavation.

The geotechnical engineer should be notified at least 1 day in advance of the start of construction. A joint meeting between the City's Officials, client, the contractor and the geotechnical engineer is recommended prior to the start of construction to discuss specific procedures and scheduling.

9.0 DRAINAGE

Building pads should be properly drained toward the street away from the slope and structure via swales or area drains. Positive pad drainage shall be incorporated into the final plans. In no cases should water be allowed to pond within the site, impound against structures or flow in a concentrated and/or uncontrolled manner down the descending slope areas.

In order to evaluate the feasibility of an infiltration system, EGL has performed percolations test at the subject site based on the County of Los Angeles Department of Public Works of "*Guidelines for Geotechnical Investigation and Reporting; Low Impact Development Stormwater Infiltration*" (GS200.2, 2021). The tests were performed within test boring HB-1 at a depth of 8 feet below existing ground surface. Approximate location of the test boring is shown on the Site Plan, Figure 2. The test procedures are described as following:

- 3"-diameter perforated pipe surrounded with gravel was placed in the test boring HB-1 so that caving would not occur during the percolation testing. The bottom of test boring was also covered with 2 inches of gravel.
- The test boring was filled with water to a depth of 44 inches for a one-hour presoak prior to conducting the percolation test on May 3, 2023.
- Actual percolation tests were performed on the same day, May 3, 2023. For the percolation test, a depth of minimum 40 inches of water was placed within the boring HB-1. The drops in the water level were recorded. For the first two tests water still remained within the boring after 30 minutes so the test time interval between readings used was 30 minutes.
- Once the time interval for the test was determined, the boring was filled with depths of 31.5 – 49.0 inches of water multiple times, and the drops in the water level were measured. This was repeated additional six (6) times until a stabilized rate was obtained. The last three measured drops were used to calculate the average design infiltration rate of the soil. Design infiltration rate calculations are presented in Appendix C.

Based on the results of our preliminary percolation test of the material, the minimum design infiltration rate is 0.08 in/hr, which falls below the minimum required rate of 0.3 in/hr. Reduction factors have been applied to our infiltration rate. Due to the high percentage of clay material encountered within test boring and percolation test results, it is EGL's opinion that an infiltration/detention basin within the natural soil is not feasible due to the very stiff/hard clayey material. Infiltration of rainwater into the ground is considered infeasible. An infiltration system using planter boxes or approved equivalent may be used. The planter boxes should be waterproofed and designed with an overflow to the street. It is our opinion that dispersal of on-site storm water runoff by planter box infiltration system is considered feasible from a geotechnical engineering standpoint.

10.0 111 STATEMENT

Based on our field investigation and the laboratory testing results, it is our opinion that the grading and proposed structures will be safe against hazard from landslide, settlement, or slippage and the proposed construction will have no adverse affect on the geologic stability of the adjacent properties provided our recommendations are followed.

11.0 REMARKS

The conclusions and recommendations contained herein are based on the findings and observations at the exploratory locations. However, soil materials may vary in characteristics between locations of the exploratory locations. If conditions are encountered during construction which appear to be different from those disclosed by the exploratory work, this office shall be notified so as to recommend the need for modifications. This report has been prepared in accordance with generally accepted professional engineering principles and practice. No warranty is expressed or implied. This report is subject to review by controlling public agencies having jurisdiction.

REFERENCES

1. American Concrete Institute, (2014), "*Building Code Requirements for Structural Concrete (ACI 318-14) and Commentary*", Chapter 19: Durability Requirements, Sections 19.3.1: Exposure Categories and Classes & 19.3.2: Requirements for Concrete Mixtures; pages 317 to 323, Tables 19.3.1.1 and 19.3.2.1".
2. ASCE, (2017), "ASCE/SEI 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures; dated 05-31-2017, 889 pages; prepared and published by American Society of Civil Engineers.
3. Cal Land Engineering Inc., (2016), "Report of Geotechnical Engineering Investigation, Proposed Residential Development, 338 – 408 South Alhambra Avenue, APN: 5259-004-036 & 037, Monterey Park, California", QCI Project No.: 16-023-095aGE, dated November 8, 2016.
4. CBC, (2022), "California Building Code: California Code of Regulations, Title 24, Part 2, Volume 2 of 2, California Building Standards Commission"; Section 1613 Earthquake Loads.
5. CDMG, (1998), "Seismic Hazard Evaluation of the El Monte 7.5-minute Quadrangle, Los Angeles County, California"; prepared by California Division of Mines and Geology; update 2005, Seismic Hazard Zone Report 024 (SHZR 024); 59 pgs, 6 figs , 4 tables, 3 plates
6. CDMG, (1998), "Seismic Hazard Evaluation of the Los Angeles 7.5-minute Quadrangle, Los Angeles County, California"; updated 2006; prepared by California Division of Mines and Geology; Seismic Hazard Zone Report 029; 59 pgs, 6 figs, 4 tables and 3 plates.
7. CDMG, (1999), "Seismic Hazard Zones of El Monte 7.5-minute Quadrangle, Los Angeles County, California"; prepared by California Division of Mines and Geology; Official Map; scale 1" = 2000'.
8. CDMG, (1999), "Seismic Hazard Zones of Los Angeles 7.5-minute Quadrangle, Los Angeles County, California"; prepared by California Division of Mines and Geology; Official Map; scale 1" = 2000'
9. EGL Associates, (2023), "Tentative Tract No.84188, 65-unit condo, 338 – 410 South Alhambra Avenue, Monterey Park, California;" Job No. 23-227-002; scale 1"=20'; Drawing 1of 3, T-1; dated 5/3/2023.
10. Los Angeles County, (2021), "Guidelines For Design, Investigation, And Reporting Low Impact Development Stormwater Infiltration"; dated 06-30-2021; Administrative Manual GS200.1, prepared by County of Los Angeles Department of Public Works, Geotechnical and Materials Engineering Division, 33 pages; http://dpw.lacounty.gov/gmed/permits/docs/policies/GS200.1.pdf
11. SEAOC & OSHPD, (2022), "Seismic Design Maps", prepared by Structural Engineers Association of California (SEAOC) and Office of Statewide Health Planning and Development (OSHPD), http://www.seismicmaps.org
12. US Department of Commerce, DM-7.2, (1982), "Foundation and Earth Structures Design Manual 7.2", Department of the Navy, Alexandria, VA, dated May 1982.
13. Yeats, Robert S., (2004) "Tectonics of the San Gabriel Basin and Surroundings, Southern California"; GSA Bulletin; September/October 2004; v.116; no. 9/10; p. 1158-1182

APPENDIX A
FIELD INVESTIGATION

EGL preformed field subsurface exploration on May 3, 2023 with the aid of hand laborers equipped with hand tools. A total of three (3) 8-inch diameter hand auger borings were drilled to a maximum depth of 15 feet below the existing ground surface. Approximate locations of these borings are shown on the Site Plan, Figure 2. Upon completion of drilling and percolation testing, all borings were backfilled with onsite soil cuttings removed from excavations and tamped. The purpose of the excavation was to investigate the engineering characteristics of the onsite soils with respect to the proposed residential development.

EGL's field engineer, who continuously logged all borings, visually classified the soils in accordance with the Unified Soil Classification System and supervised the drilling operations. Relatively undisturbed ring samples and bulk samples were collected during drilling for laboratory testing. Ring samples were taken at frequent intervals. The samples, taken by hand tools, were obtained by driving a split-tube ring sampler with successive blows of a 32-pound hammer dropping from a height of 48 inches.

Representative undisturbed samples of the subsurface soils were retained in a series of brass rings, each having an inside diameter of 2.42 inches and a height of 1.00 inch. All ring samples were transported to our laboratory. Bulk surface soil samples were also collected for additional classification and testing.

EGL

BORING LOG: HB-1

PROJECT LOCATION: 338 - 410 S. Alhambra Avenue, Monterey Park, California, 91755
EGL PROJECT NO: 23-227-002GE

EXCAVATION SERVICE:	Hand Laborers
DATE EXCAVATED:	05-03-2023
DATE LOGGED:	05-03-2023
EXCAVATION METHOD:	Hand Tools
SAMPLE METHOD:	Split Tube
ELEVATION:	N/A
LOGGED BY:	KC

S: Standard Penetration Test B: Bulk Sample R: Ring Sample

Depth (ft)	Sample: Bulk	Sample: Undisturbed	Sample: Blows Counts; 6"	USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	*Earth Material Descriptions*
0							
2	B	R	15	CL	105.8	13.4	@ 2.0' Sandy clay, dark brown to dark yellowish brown, slightly moist, firm to stiff
4		R	80	CL	115.6	16.1	@ 5.0' Sandy clay, dark yellowish brown, slightly moist to moist, hard
6		R	80	CL	108.9	18.7	@ 7.0' Sandy clay, dark yellowish brown, moist, hard
8							
10							Total Depth = 8.0 feet No Caving; No Groundwater Boring Backfilled and Tamped After Percolation Test
12							
14							Hammer Driving Weight = 30 lbs. Hammer Driving Height = 48 inches
16							
18							

BORING LOG: HB-2

	Hand Tools
	Split Tube
	N/A
	KC

Depth (ft)	Sample: Bulk	Sample: Undisturbed	Sample: Blows Counts; 6"	USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	*Earth Material Descriptions*
0							
2		R	20	CL	102.1	20.8	@ 2.0' Sandy clay, dark yellowish brown, very moist, stiff
4		R	45	CL	101.5	20.9	@ 5.0' Sandy clay, dark yellowish brown, very moist, very stiff
6							
8							
10		R	70	CL	108.7	19.3	@ 10.0' Sandy clay, brownish yellow to dark yellowish brown, very moist, hard
12							
14		B	-	CL	-	20.4	@ 10.0' Sandy clay, brownish yellow to dark yellowish brown, very moist, hard
16							
18							Total Depth = 15.0 feet No Caving; Perched Water @ 8.0 feet Boring Backfilled and Tamped
20							
22							Hammer Driving Weight = 30 lbs. Hammer Driving Height = 48 inches

EGL

BORING LOG: HB-3

PROJECT LOCATION: 338 - 410 S. Alhambra Avenue, Monterey Park, California, 91755

EGL PROJECT NO: 23-227-002GE

EXCAVATION SERVICE:	Hand Laborers
DATE EXCAVATED:	05-03-2023
DATE LOGGED:	05-03-2023
EXCAVATION METHOD:	Hand Tools
SAMPLE METHOD:	Split Tube
ELEVATION:	N/A
LOGGED BY:	KC

S: Standard Penetration Test B: Bulk Sample R: Ring Sample

Depth (ft)	Sample: Bulk	Sample: Undisturbed	Sample: Blows Counts; 6"	USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	*Earth Material Descriptions*
0							
2		R	25	CL	105.6	18.5	@ 2.0' Sandy clay, dark brown, moist, stiff
4							
6		R	30	CL	110.2	18.3	@ 5.0' Sandy clay, yellowish brown to brownish yellow, moist to very moist, very stiff
8							
10		R	80	CL	107.2	20.3	@ 10.0' Sandy clay, brownish yellow, very moist, hard
12							
14							Total Depth = 10.0 feet No Caving; Perched Water @ 10.0 feet Boring Backfilled and Tamped
16							
18							Hammer Driving Weight = 30 lbs. Hammer Driving Height = 48 inches

APPENDIX B

LABORATORY TESTING

During the subsurface exploration, EGL personnel collected relatively undisturbed ring samples and bulk samples. The following tests were performed on selected soil samples:

Moisture-Density

The moisture content and dry unit weight were determined for each relatively undisturbed soil sample obtained in the test borings in accordance with ASTM D2937 standard. The results of these tests are shown on the boring logs in Appendix A.

Shear Tests

Shear tests were performed in a direct shear machine of strain-control type in accordance with ASTM D3080 standard. The rates of deformation were 0.025 inch per minute. Selected samples were sheared under varying confining loads in order to determine the Coulomb shear strength parameters: internal friction angle and cohesion. The shear test results are presented in the attached Figures.

Consolidation Tests

Consolidation tests were performed on selected undisturbed soil samples in accordance with ASTM D2435 standard. The consolidation apparatus is designed for a one-inch high soil filled brass ring. Loads are applied in several increments in a geometric progression and the resulting deformations are recorded at selected time intervals. Porous stones are placed in contact with the top and bottom of each specimen to permit addition and release of pore fluid. The samples were inundated with water at a load of one kilo-pounds per square foot (kips), and the test results are shown on the attached Figures.

Corrosion Test

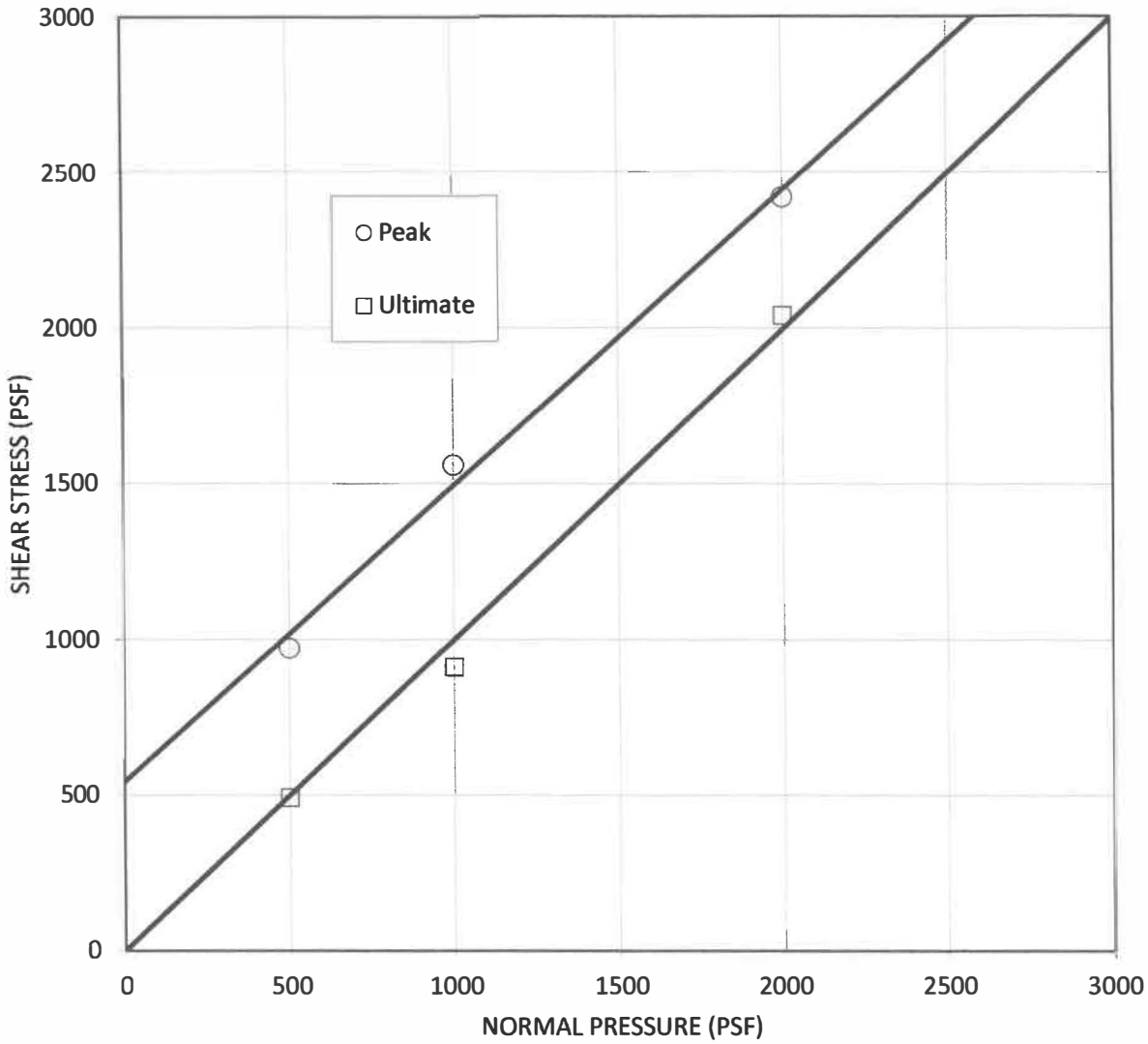
Corrosion series of bulk sample was tested in accordance with Caltrans test methods. The series consist of Chloride Content, Sulfate Content, pH, and Minimum Resistivity tests. The methods used and test results are as follows:

Sample Location	pH	CT-412 Chloride (ppm)	CT-417 Sulfate (% by weight)	CT-643 Min. Resistivity (ohm-cm)
B-1 @ 0'-5'	7.32	125	0.002	1,500

Expansion Index

The Expansion Index was determined for the typical site material encountered in the borings. The laboratory standard used was ASTM D4829-95 and the test results are as follows:

Sample Location	Expansion Index	UBC Classification
Bulk B-1 @ 0-5'	63	Medium



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
HB-1	2	5.0	Ring	CL	○	542	44
					□	0	44

Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)	γ_d (pcf)	S (%)
500	16.1	20.2	114.9	100.0
1000	16.1	18.2	115.4	100.0
2000	16.1	17.7	115.5	100.0

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

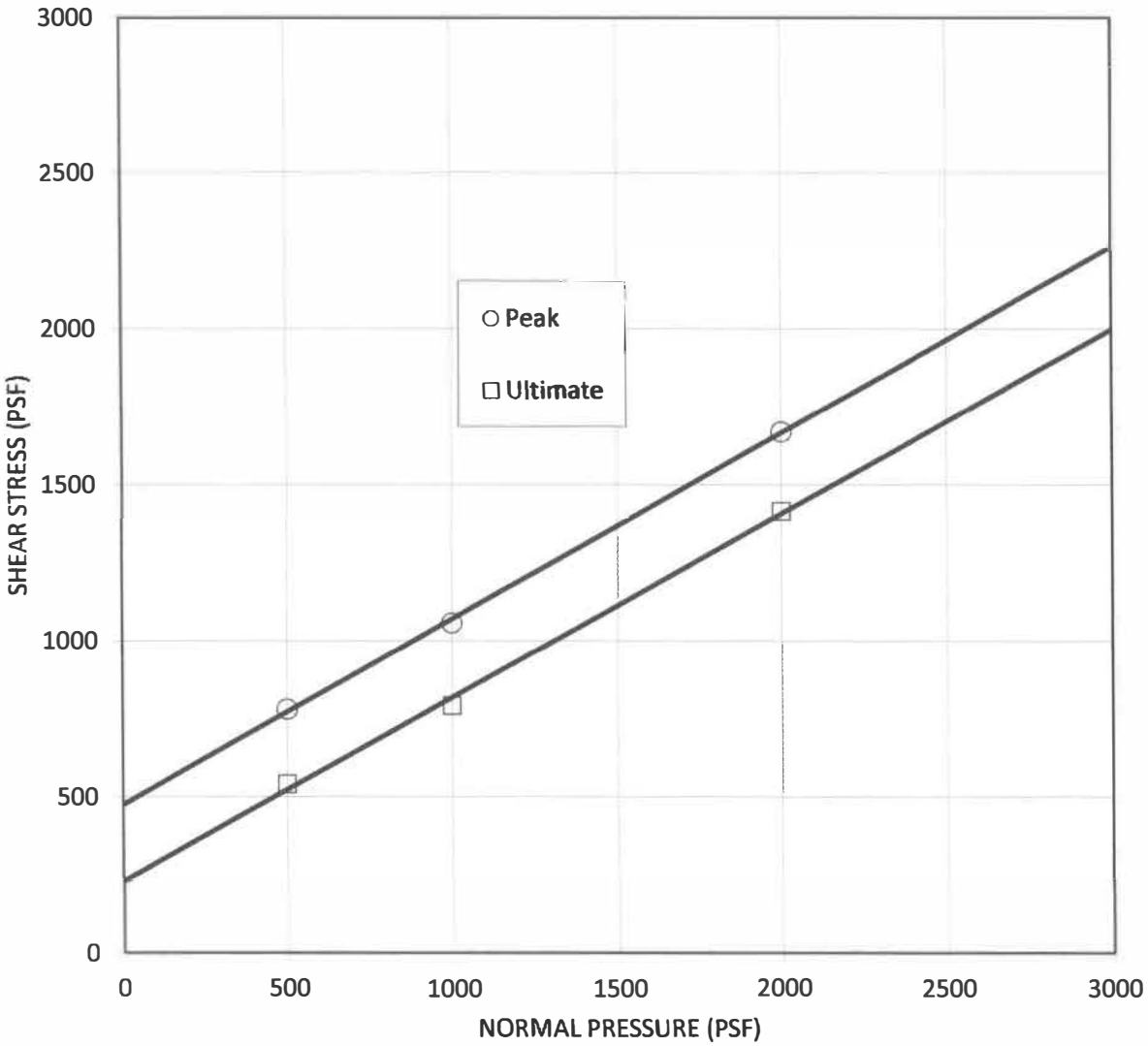
EGL Project No.: 23-227-002GE

Address: 338 - 410 S. Alhambra Avenue
Monterey Park, California

DIRECT SHEAR

05/23 (ASTM D3080) Figure

11819 Goldring Road, Unit A, Arcadia, California 91006; Phone (626) 263-3588; Email ryan@eglab.com



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
HB-3	1	2.0	Ring	CL	○	474	31
					□	228	31

Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)	γ_d (pcf)	S (%)
500	18.5	21.3	107.9	100.0
1000	18.5	21.3	109.2	100.0
2000	18.5	19.7	110.2	100.0

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

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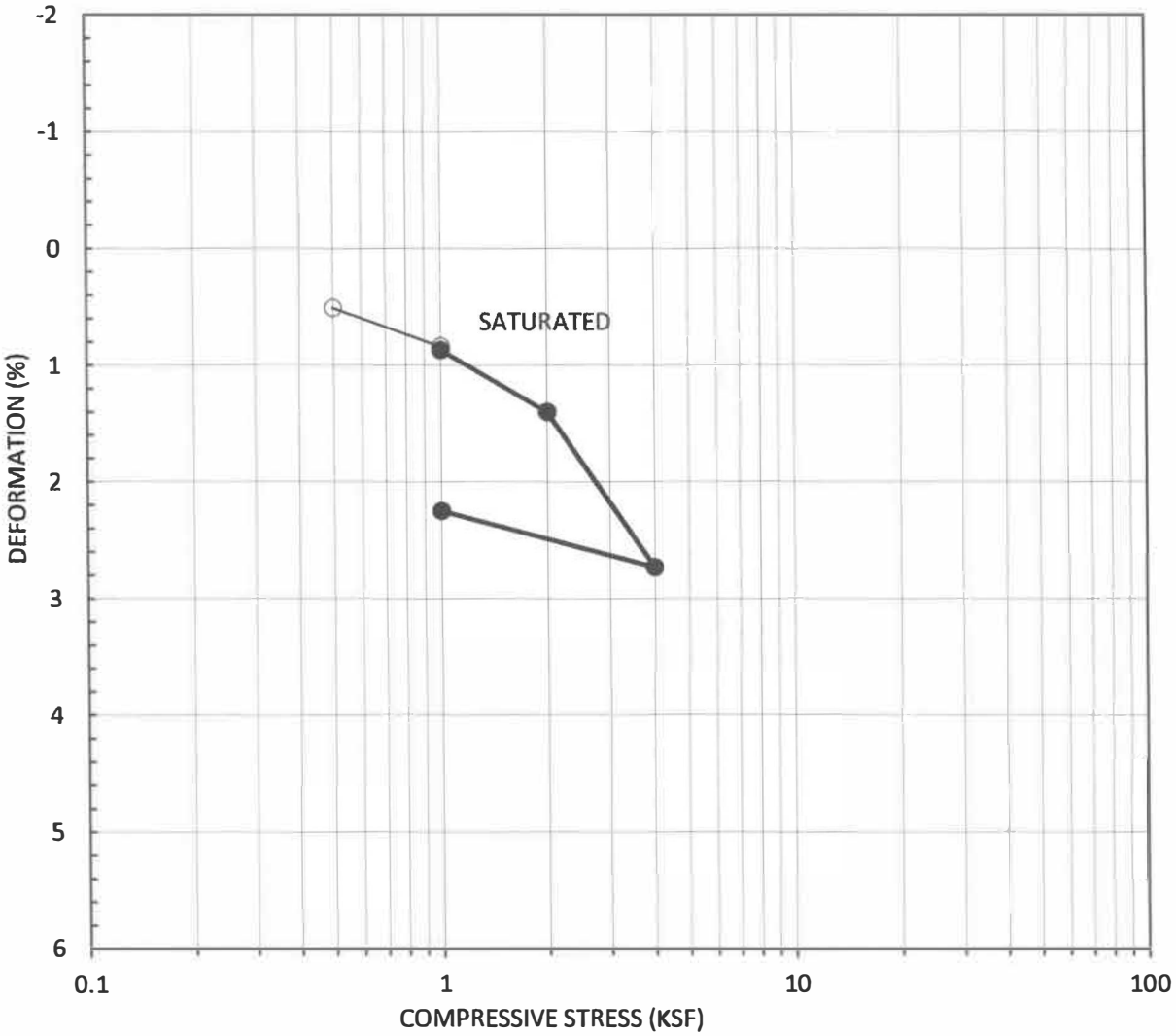
DIRECT SHEAR

05/23 (ASTM D3080) Figure

11819 Goldring Road, Unit A, Arcadia, California 91006; Phone (626) 263-3588; Email ryan@eglab.com



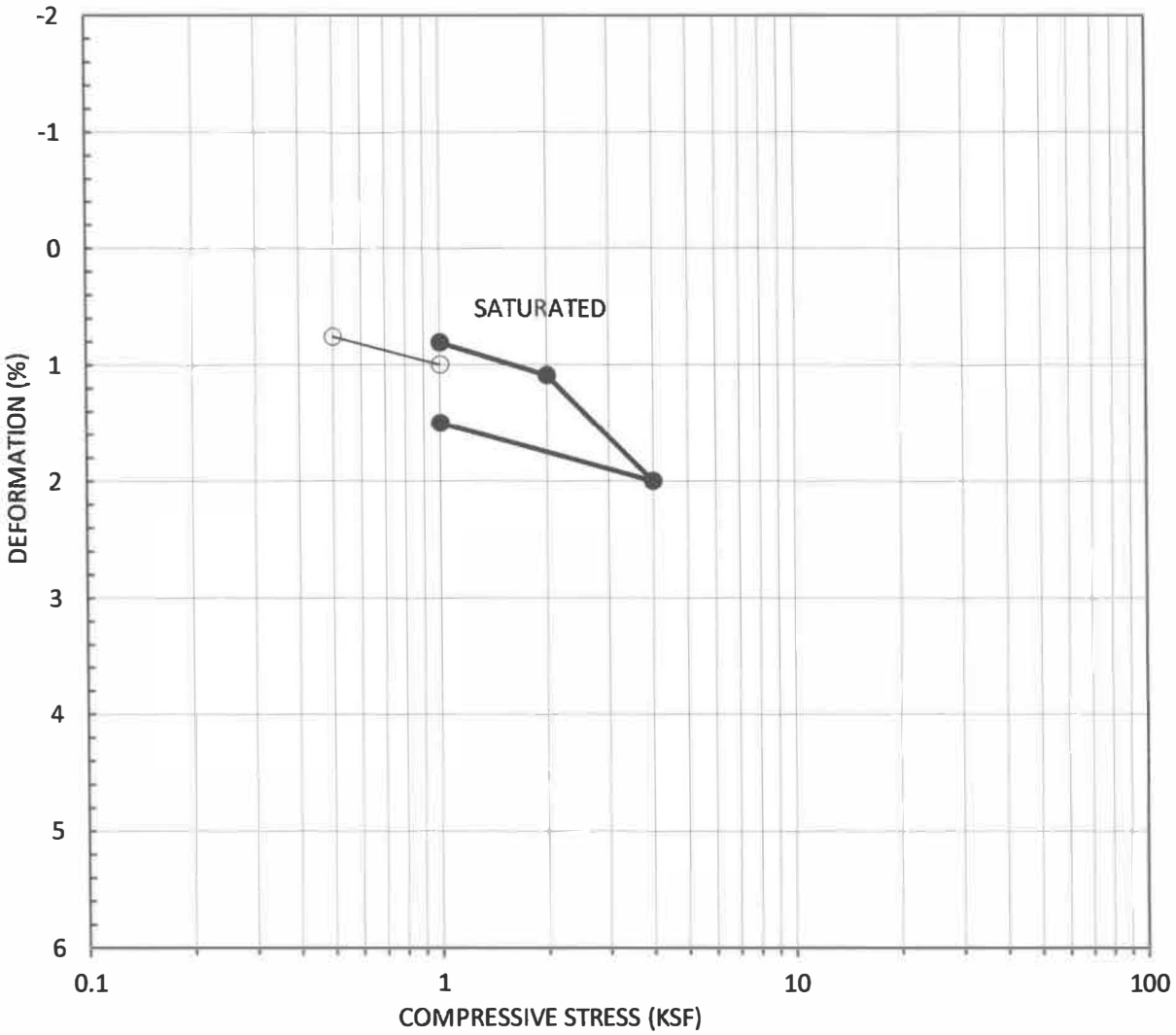
Symbol	Boring No.	Sample No.	Depth (Ft.)	Soil Type	Init. Moisture Content (%)	Init. Dry Density	Init. Void Ratio
○	HB-1	1	2.0	CL	13.4	107.6	0.566

ENVIRONMENTAL
GEOTECHNOLOGY
LABORATORY

Project Address:
338 - 410 S. Alhambra Avenue
Monterey Park, California

CONSOLIDATION

05/23 (ASTM D2435) Figure



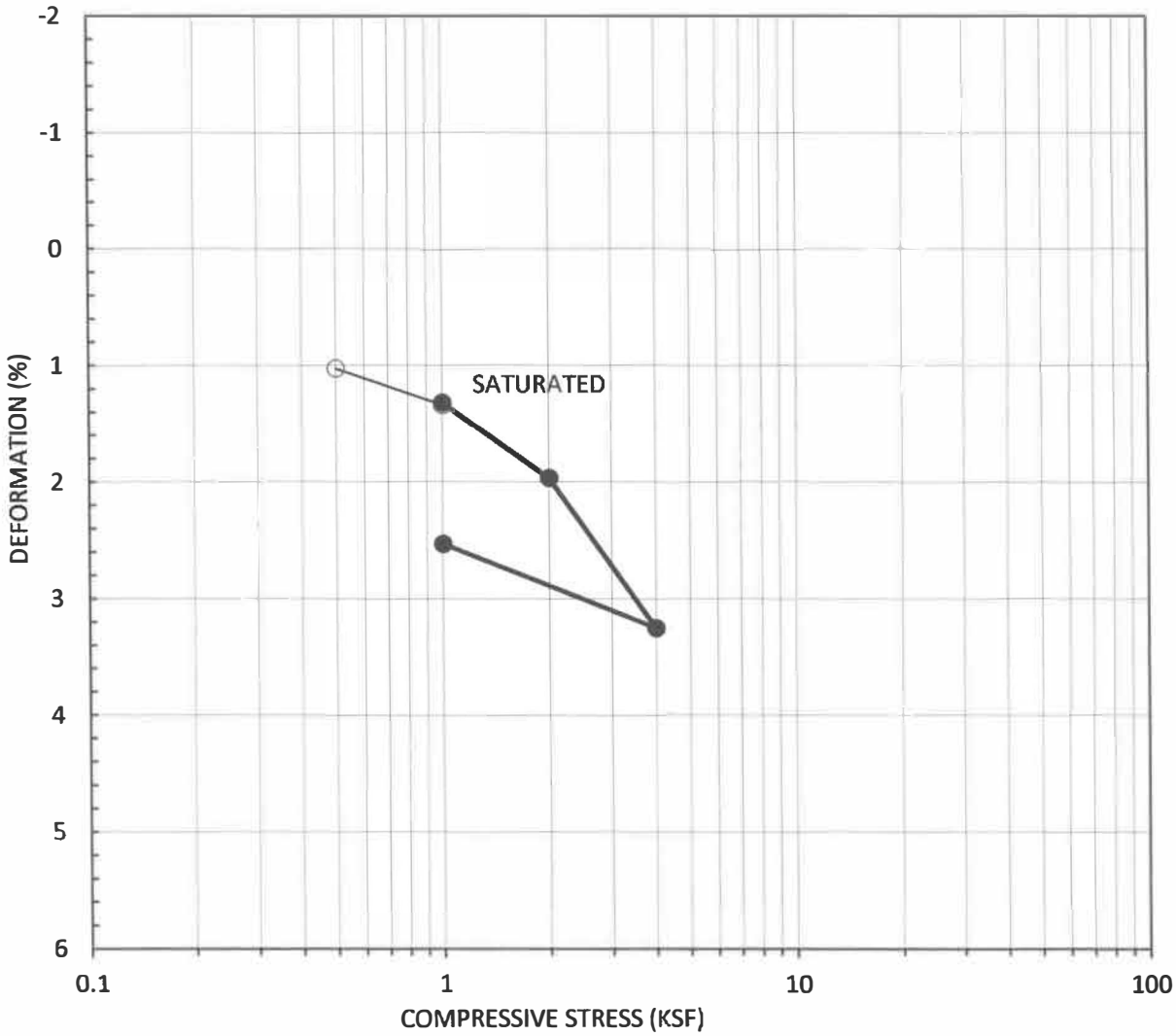
Symbol	Boring No.	Sample No.	Depth (Ft.)	Soil Type	Init. Moisture Content (%)	Init. Dry Density	Init. Void Ratio
○	HB-2	3	10.0	CL	19.3	110.2	0.528

ENVIRONMENTAL
GEOTECHNOLOGY
LABORATORY

Project Address:
338 - 410 S. Alhambra Avenue
Monterey Park, California

CONSOLIDATION

05/23 (ASTM D2435) Figure



Symbol	Boring No.	Sample No.	Depth (Ft.)	Soil Type	Init. Moisture Content (%)	Init. Dry Density	Init. Void Ratio
○	HB-3	2	5.0	CL	18.3	110.2	0.529

ENVIRONMENTAL
GEOTECHNOLOGY
LABORATORY

Project Address:
338 - 410 S. Alhambra Avenue
Monterey Park, California

CONSOLIDATION

05/23 (ASTM D2435) Figure

APPENDIX C
INFILTRATION TEST RESULTS

PRESOAK AND PERCOLATION TEST: Boring HB-1: May 3, 2023
Test Boring Diameter and Depth: Test Boring HB-1: 8"-diameter & 8.0'-deep

PRESOAK: HB-1. May 3, 2023

Test Location	Boring Diameter (in)	Total Boring Depth (ft)	Initial Water Depth, d_i (in)	Drop, Δd (in)	Time (hr:min) Start / End	Δ Time (min)	Notes:
HB-1	8.0	8.0	44.0	4.0	9:55 / 10:25	30	
HB-1	8.0	8.0	40.0	3.0	10:25 / 10:55	30	

PERCOLATION TEST: HB-1. May 3, 2023

Test Location	Boring Diameter (in)	Total Boring Depth (ft)	Initial Water Depth, d_i (in)	Drop, Δd (in)	Time (hr:min) Start / End	Δ Time, Δt^+ (min)	Measured Percolation Rate (in/hr)	Total Reduction Factor*	Design Infiltration Rate (in/hr)
HB-1	8.0	8.0	43.5	4.5	11:15 / 11:45	30	0.40	4.00	0.10
HB-1	8.0	8.0	39.0	4.5	11:45 / 12:15	30	0.44	4.00	0.11
HB-1	8.0	8.0	34.5	4.5	12:15 / 12:45	30	0.49	4.00	0.12
HB-1	8.0	8.0	46.0	4.0	12:45 / 1:15	30	0.33	4.00	0.08
HB-1	8.0	8.0	47.0	4.0	1:15 / 1:45	30	0.33	4.00	0.08
HB-1	8.0	8.0	49.0	4.0	1:45 / 2:15	30	0.31	4.00	0.08
HB-1	8.0	8.0	48.0	4.0	2:15 / 2:45	30	0.32	4.00	0.08
HB-1	8.0	8.0	48.0	4.0	2:45 / 3:15	30	0.32	4.00	0.08

Average Design Infiltration Rate (in/hr): 0.08

Measured Percolation Rate = (60/Δt * Vol. of Hole Tested) / (Area of Boring Tested)

Reduction Factor, RF_t = 2

RF_v = 1

RF_s = 1

Site: 338 - 410 S. Alhambra Ave, Monterey Park
Project No: 23-227-002

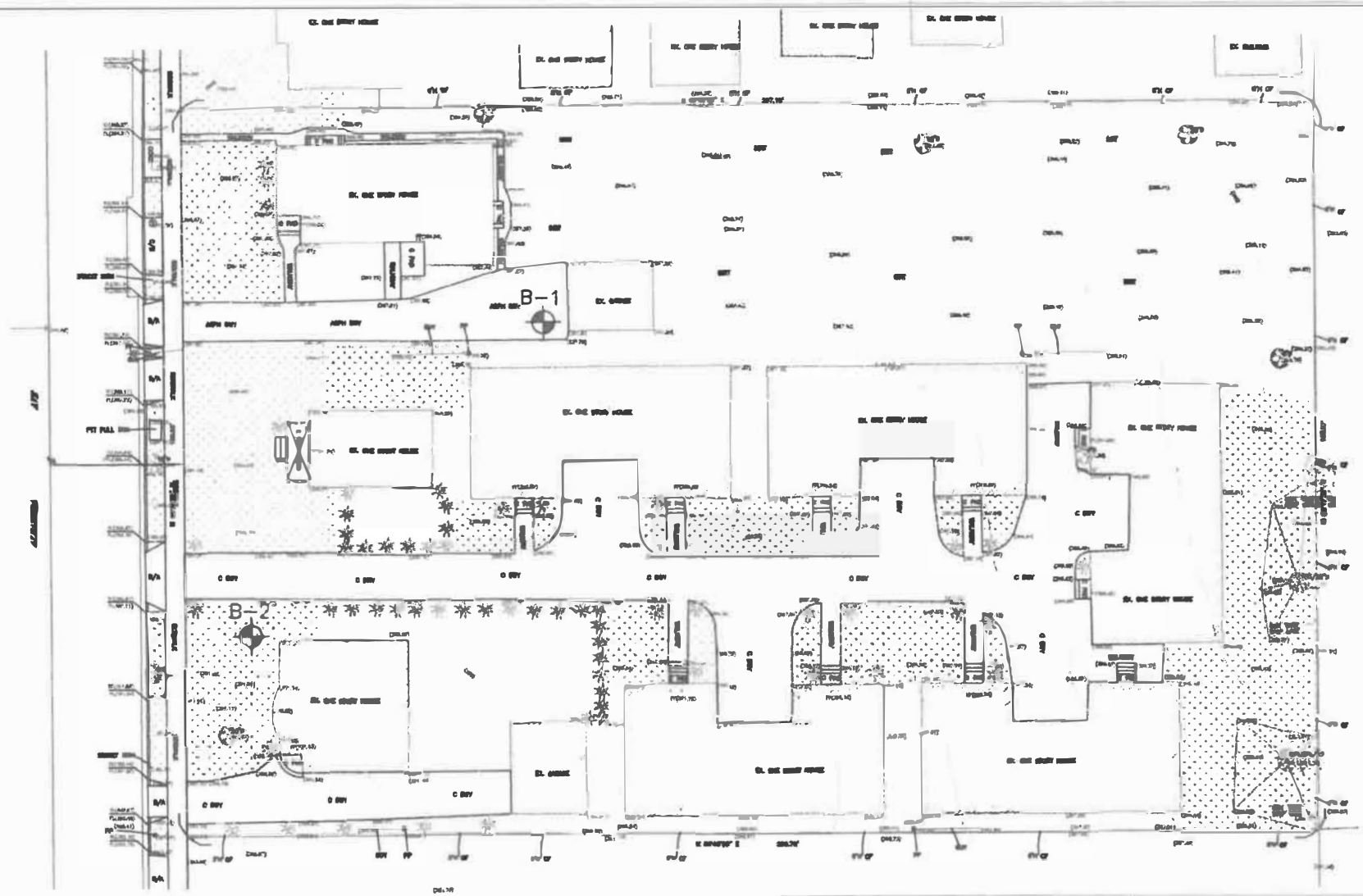
*Total Reduction Factor, RF = $RF_t + RF_v + RF_s$

Design Infiltration Rate = Measured Percolation Rate/RF

APPENDIX D

PREVIOUS INVESTIGATION

Cal Land Engineering, Inc. 2016
(Site Plan, Boring logs and laboratory testing)



LEGEND

B-1 Approxmiate boring location

N

SCALE 1" = 40'

CalLand Engineering, Inc.
dba Quartech Consultants

Geotechnical, Enviromental & Civil Engineering Services

Project Address:

APN: 5259-004-036 & 037
338-408 S. Alhambra Avenue
Monterey Park, California

SITE PLAN

11/16

FIGURE 2

Cal Land Engineering, Inc.
dba Quartech Consultants

BORING LOG B-1

PROJECT LOCATION: 338-408 S. Alhambra Avenue, Monterey Park, California
PROJECT NO: 16-023-095

DATE DRILLIED: 10-14-16
SAMPLE METHOD: Hollow Stem
ELEVATION: N/A
LOGGED BY: JL

B: Bulk Bag
S: Standard Penetration Test
R: Ring Sample

Depth (ft)	Sample: Bulk	Sample: Undisturbed	Sample: Blows/6"	USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Description of Material
	B			CL		14.1	Sandy clay, medium to dark brown, moist, stiff. Percent of fine = 72.6%. LL=32, PL=20, PI=12.
		R	5 7 7	CL	86.5	15.1	Sandy clay, medium brown, moist, stiff.
5		R	4 5 5	CL	103.1	16.6	Sandy clay, medium to dark brown, moist, medium firm. Percent of fine = 68.5% LL= 31, PL=18, PI=13.
	B			CL		18.0	Sandy clay, tannish brown, moist to very moist, very stiff.
10		R	10 15 22	CL	104.3	18.3	Sandy clay, tannish brown, moist to very moist, very stiff. Percent of fine = 70.1%. LL=33, PL=20, PI=13.
15		R	21 31 38	CL	105.6	16.2	Silty clay to sandy clay, tannish brown, moist to very moist, hard. Percet of fine= 83.8%. LL= 47, PL=23, PI=24.
20		R	15 30 50/5"	CL	106.9	17.6	Silty clay, reddish brown, moist, hard. Percet of fine= 88.2%. LL= 50, PL=24, PI=26.
25		R	17 25 29	CL	105.5	22.0	Silty clay, reddish brown, very moist, hard. Percet of fine= 86.7%. LL= 49, PL=24, PI=25.
30		R	15 28 33	CL	107.0	22.5	Silty clay, reddish brown, very moist, hard. Percet of fine= 90.2%. LL= 50, PL=26, PI=24.
35		R	19 30 30	CL	104.8	22.1	Silty clay, reddish brown, very moist, hard. Percet of fine= 89.4%. LL= 49, PL=26, PI=23.

Cal Land Engineering, Inc.
dba Quartech Consultants

BORING LOG B-1

PROJECT LOCATION: 338-408 S. Alhambra Avenue, Monterey Park, California
PROJECT NO: 16-023-095

DATE DRILLIED: 10-14-16
SAMPLE METHOD: Hollow Stem
ELEVATION: N/A
LOGGED BY: JL

B: Bulk Bag
S: Standard Penetration Test
R: Ring Sample

Depth (ft)	Sample: Bulk	Sample: Undisturbed	Sample: Blows/6"	USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Description of Material
40		R	20 26 34	CL	105.0	21.7	Silty clay, reddish brown, very moist, hard. Percent of fine = 75.8%. LL=47, PL=27, PI=20
45		R	19 38 50	ML	103.9	20.9	Silty clay, medium brown, very moist, hard. Percent of fine = 80.8%. LL=46, PL=27, PI=19
50		R	50/5"	ML	104.1	21.9	Silty clay, medium brown, very moist, hard. Percent of fine = 78.9%. LL=44, PL=27, PI=17

Total Depth: 50.5'
No groundwater
Hole backfilled

Hammer Driving Weight: 140 lbs
Hammer Driving Height: 30 inches

Cal Land Engineering, Inc.
dba Quartech Consultants

BORING LOG B-2

PROJECT LOCATION: 338-408 S. Alhambra Avenue, Monterey Park, California
PROJECT NO: 16-023-095

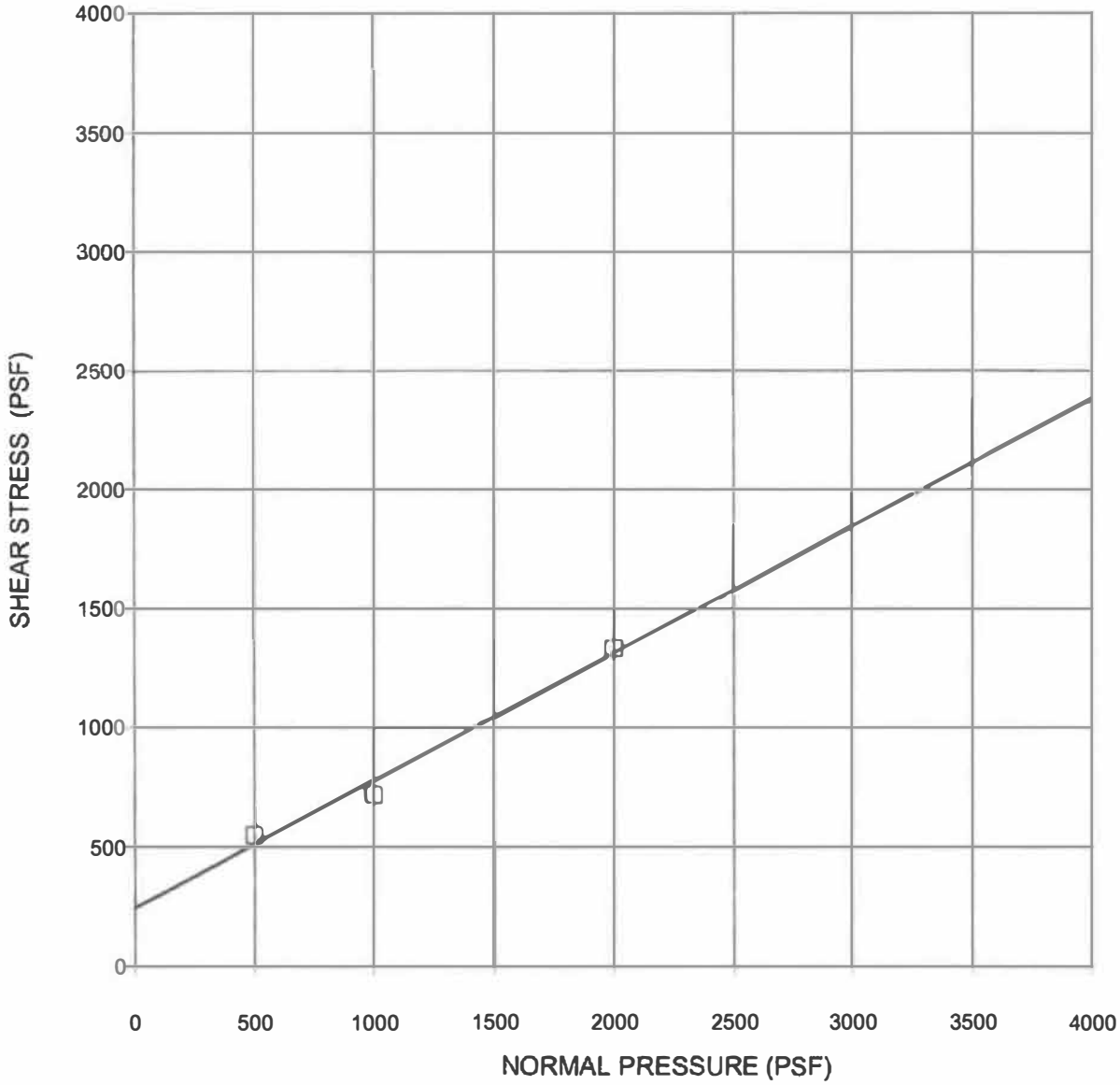
DATE DRILLIED: 10-14-16
SAMPLE METHOD: Hollow Stem
ELEVATION: N/A
LOGGED BY: JL

B: Bulk Bag
S: Standard Penetration Test
R: Ring Sample

Depth (ft)	Sample: Bulk	Sample: Undisturbed	Sample: Blows/6"	USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Description of Material
		R	6 6 8	CL	90.6	14.7	Sandy clay, medium brown, moist, stiff.
5		S	5 5 6	CL		16.3	Sandy clay, medium to dark brown, moist, stiff.
10		R	12 14 18	ML	100.2	17.8	Clayey silt, tannish brown, moist, very stiff.
15		S	17 19 24	CL		18.3	Sandy clay, medium to reddish brown, moist to very moist, hard.
20		S	18 28 30	CL		19.1	Sandy to silty clay, medium brown, moist to very very moist, hard.

Total Depth: 21.5'
No groundwater
Hole backfilled

Hammer Driving Weight: 140 lbs
Hammer Driving Height: 30 inches



SYMBOL	BOREHOLE NUMBER	SAMPLE NUMBER	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	COHESION (PSF)	FRICTION ANGLE (DEG)
□	B-1	N/A	2.0	RING	CL	240	28

Vertical Loads (PSF)	Moisture Content Before Test(%)	Moisture Content After test (%)
500	15.1	34.3
1000	15.1	33.8
2000	15.1	33.4

Cal Land Engineering, Inc.
dba Quartech Consultants
Geotechnical, Environmental & Civil Engineering Services

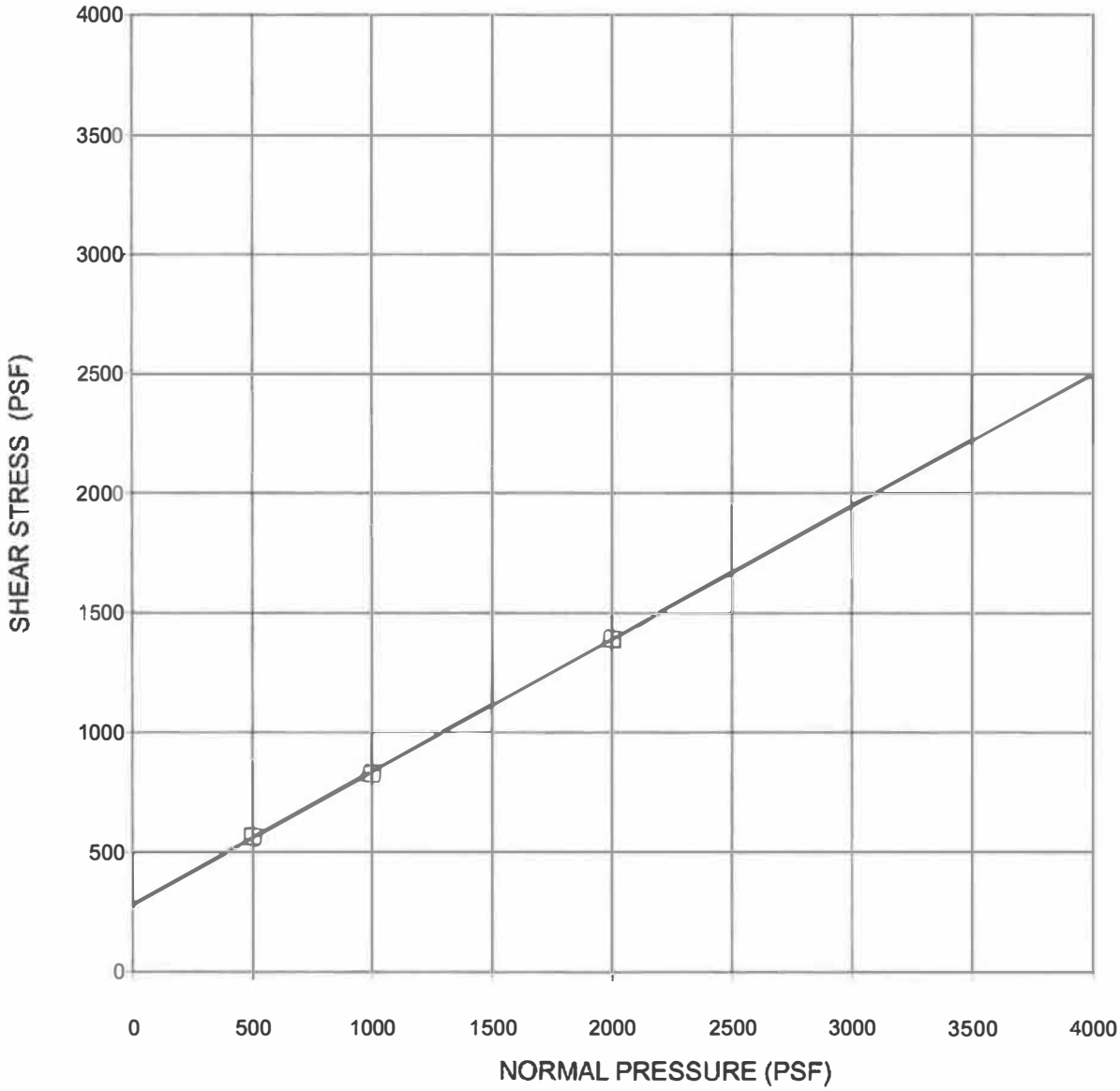
Project Address:

APN: 5259-004-036 & 037
338-408 South Alhambra Avenue
Monterey Park, California

DIRECT SHEAR
(ASTM D3080)

11/16

FIGURE 3



SYMBOL	BOREHOLE NUMBER	SAMPLE NUMBER	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	COHESION (PSF)	FRICTION ANGLE (DEG)
□	B-1	N/A	10.0	RING	CL	280	29

Vertical Loads (PSF)	Moisture Content Before Test(%)	Moisture Content After test (%)
500	18.3	22.3
1000	18.3	22.0
2000	18.3	21.5

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Geotechnical, Environmental & Civil Engineering Services

Project Address:

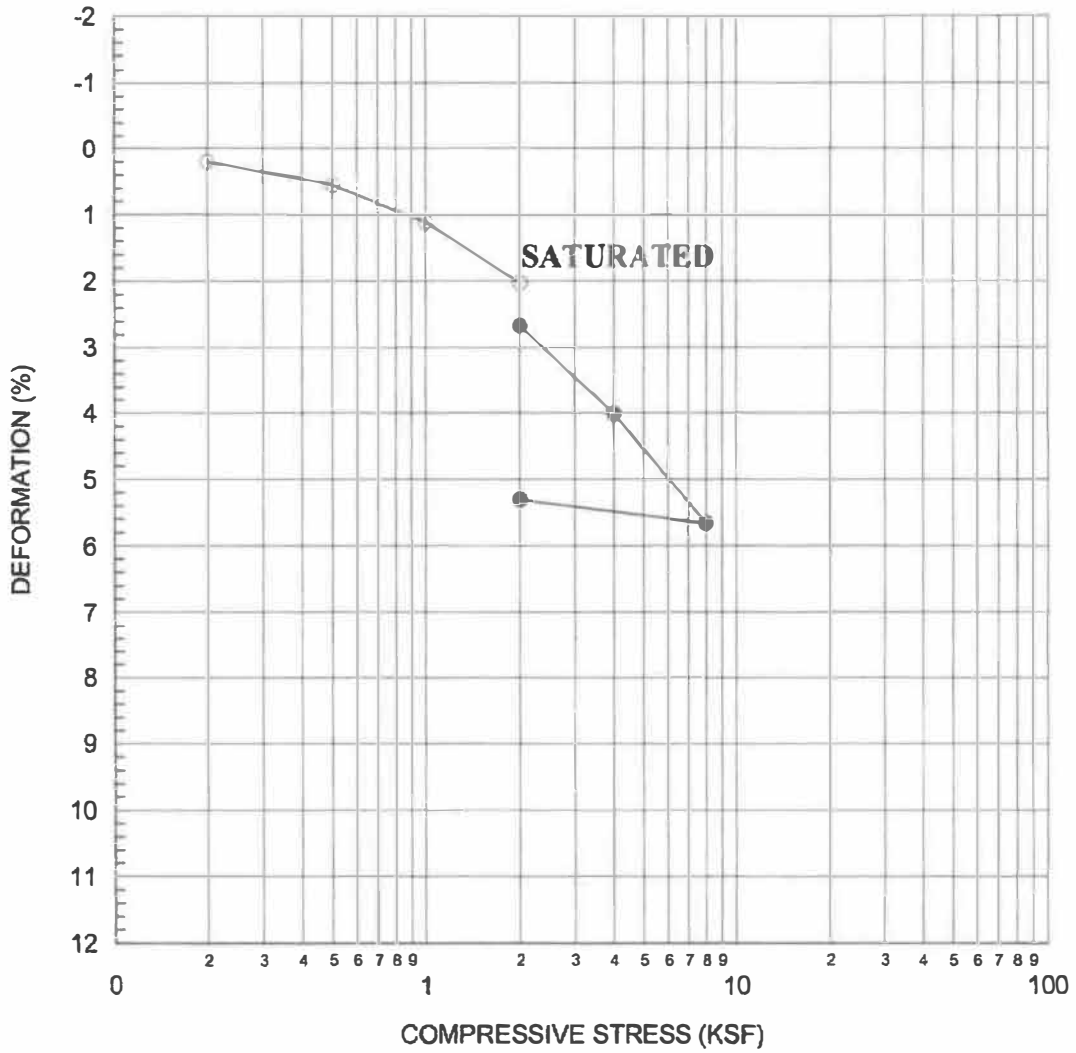
APN: 5259-004-036 & 037
338-408 South Alhambra Avenue
Monterey Park, California

DIRECT SHEAR

(ASTM D3080)

11/16

FIGURE 3



SYMBOL	BORING NO	SAMPLE NO	DEPTH (FT)	SOIL TYPE	INIT. MOISTURE CONTENT (%)	INIT. DRY DENSITY (PCF)	INIT. VOID RATIO
○	B-1	N/A	10.0	CL	18.3	104.3	0.615

Cal Land Engineering, Inc
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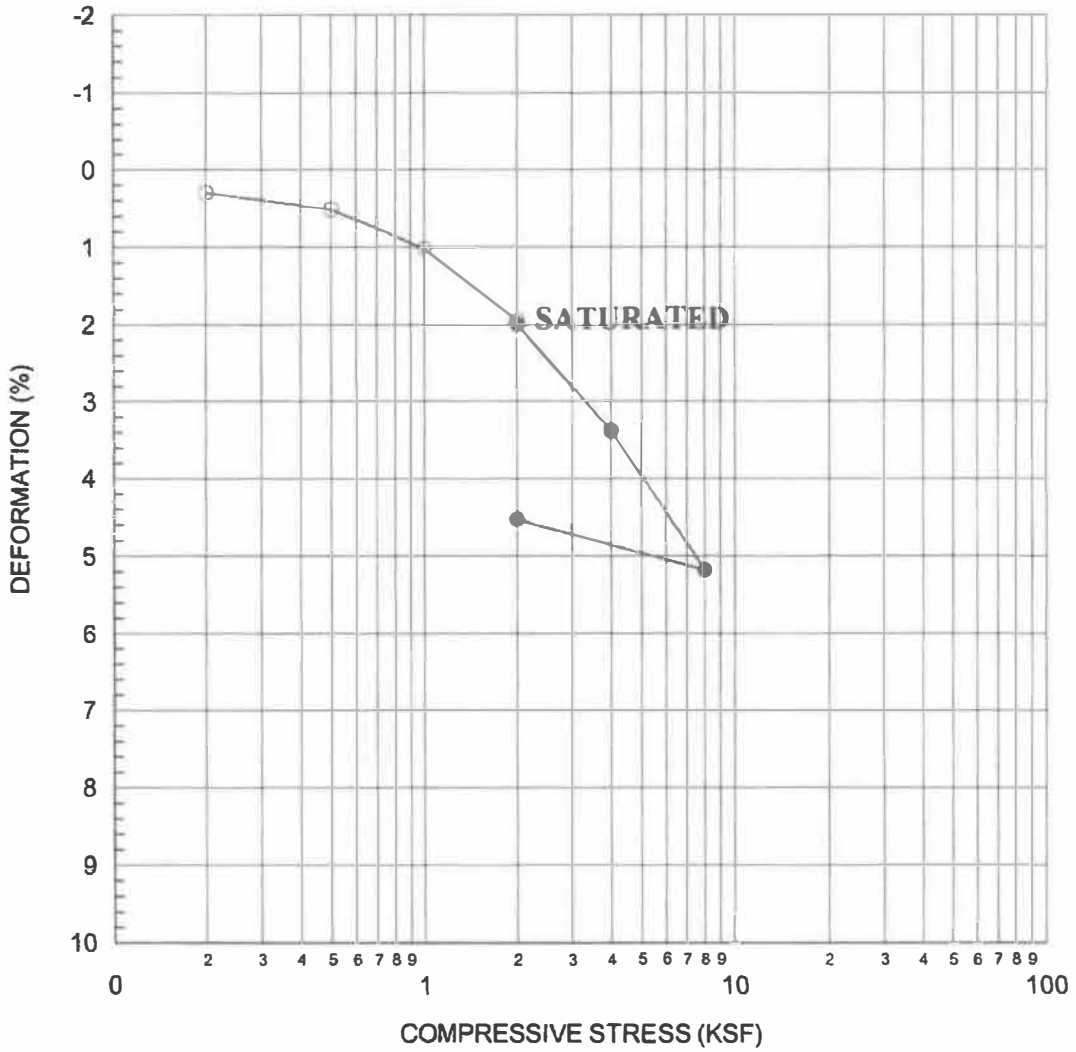
Geotechnical, Environmental & Civil Engineering Services

Project Address:
APN: 5259-004-036 & 037
338-408 S. Alhambra Avenue
Monterey Park, California

CONSOLIDATION
(ASTM D2435)

11/16

FIGURE 4



SYMBOL	BORING NO	SAMPLE NO	DEPTH (FT)	SOIL TYPE	INIT. MOISTURE CONTENT (%)	INIT. DRY DENSITY (PCF)	INIT. VOID RATIO
○	B-1	N/A	20.0	CL	17.6	113.9	0.479

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dba Quartech Consultants
Geotechnical, Environmental & Civil Engineering Services

Project Address:
APN: 5259-004-036 & 037
338-408 S. Alhambra Avenue
Monterey Park, California

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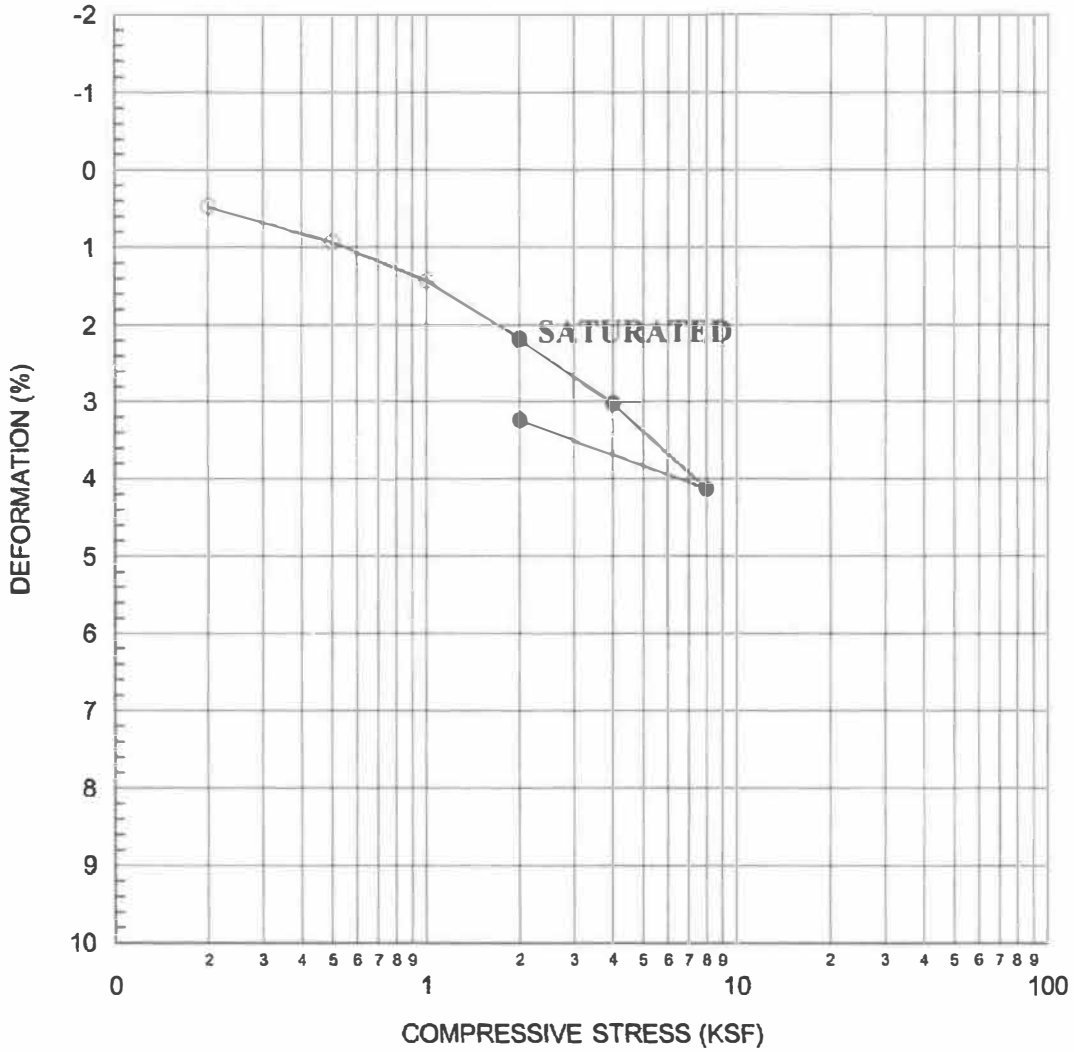
(ASTM D2435)

11/16

FIGURE 5



SYMBOL	BORING NO	SAMPLE NO	DEPTH (FT)	SOIL TYPE	INIT. MOISTURE CONTENT (%)	INIT. DRY DENSITY (PCF)	INIT. VOID RATIO
○	B-1	N/A	30.0	CL	22.5	107.0	0.575

Cal Land Engineering, Inc dba Quartech Consultants Geotechnical, Environmental & Civil Engineering Services	Project Address: APN: 5259-004-036 & 037 338-408 S. Alhambra Avenue Monterey Park, California

CONSOLIDATION
(ASTM D2435)

11/16

FIGURE 6

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1650 SPRUCE STREET, STE 106
RIVERSIDE, CA 92507
951.787.9222
WWW.MIGCOM.COM

Memo

To: Alex Lai, The Commons of MPK LLC

CC: Cameron Hile, MIG

From: Chris Dugan and William Deeman

Date: April 17, 2023

SUBJECT: Noise and Vibration Analysis for South Alhambra Avenue Multi-Family Condominium Project, Monterey Park, CA

MIG, Inc. (MIG) has prepared this memorandum at the request of The Commons of MPK LLC. This memorandum estimates the potential noise and vibration levels for the proposed South Alhambra Avenue Multi-Family Condominium Project (proposed Project) and evaluates those noise and vibration levels against applicable standards established by the City. As explained in this memorandum, the proposed Project, with mitigation, would not generate temporary or permanent noise levels that would exceed the City's standards or otherwise result in a substantial increase in ambient noise levels, would not generate excessive groundborne vibration or groundborne noise levels, and would not expose people residing or working in the Project area to excessive aircraft noise levels.

PROJECT DESCRIPTION

The proposed Project involves the construction of a 65-unit multifamily residential housing facility across three parcels in the eastern part of Monterey Park, California.

The approximately 1.73-acre Project site is located at 338-410 South Alhambra Avenue. The site currently contains 15 residential structures (14 habitable units), which would be demolished as part of the Project. This includes two (2) one-story residential units with garages totaling 1,516 square feet, 12 multi-family units totaling 9,976 square feet, and a single-family residential unit that is 1,600 square feet. The proposed Project would have a building footprint of approximately 45,067 square feet across both the central block and the western block of townhouses, consisting of the 44,177 square foot parking garage and an 890 square foot lobby. The next three stories would be for residential use. Levels two, three, and four would be approximately 34,551 square feet. The entire building, including the parking garage and lobby, would total approximately 148,578 square feet. There would be approximately 13,700 square feet of landscaped common open space, which would include the approximately 10,374 square foot soft ground courtyard. There would be 99 parking spaces in the parking garages. Refer to Attachment 1 for the Project's site plan (TAG Design Works, 2023)

The site is located on the east side of South Alhambra Avenue, between East Newmark Avenue and East Graves Avenue, at the eastern terminus of Peach Street in the City of Monterey Park. Interstate 10 (I-10) is approximately 0.9 miles to the north, I-710 is approximately 2.8 miles to the west, and State Route (SR) 60 is approximately 1.9 miles to the south. The nearest airport, Whittier Air Strip, is approximately 2.8 miles southeast of the Project site and the nearest school, Monterey Vista Elementary School, is approximately 0.4 miles southeast of the Project site. The site is bound on the north by single-family residential uses, on the east and south by multi-family residential uses, and on the west by South Alhambra Avenue. Single-family residential uses are located across South Alhambra Avenue.

The proposed Project would involve demolition of existing buildings, site preparation, grading, including soil excavation for the underground parking garage, new building construction, paving, and architectural coating. Construction is expected to begin as soon as July 2023 and last approximately 19 months. The proposed Project's construction schedule and anticipated equipment usage is listed in Table 1, *Project Construction Activities*.

Table 1: Project Construction Activities

Phase	Duration (Working Days)	Typical Equipment Used
Demolition	10	Concrete/Industrial Saw, Dozer, Backhoe
Site Preparation	5	Grader, Dozer, Backhoe
Grading	20	Excavator, Grader, Dozer, Backhoe
Trenching	10	Trencher
Building Construction (Foundation)	30	Crane, Forklift, Generator, Backhoe, Welder
Building Construction (Vertical)	360	Crane, Forklift, Generator, Backhoe, Welder
Paving	10	Cement and Mortar Mixer, Paver, Roller, Paving Equipment, Backhoe
Architectural Coating	10	Air Compressor

The Project is expected to be operational in 2025. Once operational, the proposed Project would operate as a residential land use, similar to the existing residential uses in the area.

The following sections describe the ambient noise environment near the proposed Project and evaluate the proposed Project's potential to impact the existing noise environment near the Project. Please refer to Attachment 2 for background information on environmental noise and vibration, including commonly used terminology.

EXISTING NOISE ENVIRONMENT

The proposed Project is located in eastern Monterey Park, in an area classified and designated as High Density Residential by the City's Zoning Code and by the Land Use and Urban Design Element of the City's General Plan. The City's General Plan identifies street and freeway traffic and aircraft overflights as the dominant noise sources in the City, with lawnmowers, children at play, and dogs barking specifically contributing to residential noise (City of Monterey Park, 2022).

Existing ambient noise levels in the Project area were measured in August 2018 (MIG, 2018; see Attachment 3). Noise levels were measured with one Larson Davis Model LxT, Type 1, sound level meter. The meter's receiving microphone was set at a high of roughly five feet above ground level to approximate a human receptor. Noise monitoring was conducted in ten-minute intervals. Conditions during the monitoring were mostly sunny with temperatures ranging from high 90s to 100s, with calm winds (0-5 mph).One short-term measurement was conducted to provide typical ambient noise levels in the vicinity of the Project area, provide direct observations of existing noise sources at and in the vicinity of the Project area, and evaluate Project noise levels at nearby sensitive receptors. The ambient noise monitoring location was within the Project site on a private driveway in the western portion of the Project site, approximately 50 feet from the centerline of South Alhambra Avenue.

Based on observations made during the ambient noise monitoring, the existing noise environment in the Project vicinity consists primarily of vehicles on South Alhambra Avenue, overhead air traffic, and residential noises such as leaf blowers and pedestrians. Table 2, *Existing Ambient Noise Levels (dBA)*, summarizes the results of the ambient noise monitoring.

Table 2: Existing Ambient Noise Levels (dBA)

Monitoring Start Time	Leq	Lmin	Lmax	L (50)
2:00 PM	59.2	36.9	81.4	51.2
3:00 PM	57.2	38.9	75.1	52.4
4:00 PM	58.0	39.3	78.7	51.4
5:00 PM	56.8	38.9	75.0	51.4
6:00 PM	55.6	40.0	70.0	50.3
2:00 pm – 7:00 pm; Monitoring Average	57.5	36.9	75.0	51.4

Source: MIG, 2018 (See Attachment 3)

Although ambient noise data was measured in 2018, the data is still considered representative of conditions in Spring 2023 because the proposed Project is situated in a residential area, away from major transportation corridors, and has not experienced substantial changes in land uses. Thus, it is unlikely that substantial changes to ambient noise levels near the Project site have occurred since 2018.

The Project site is not located within any airport planning boundaries. The closest public or private airport facility, Whitter Air Strip, is located approximately 2.8 miles southeast of the Project site.

NOISE AND VIBRATION ANALYSIS

The proposed Project would generate noise during construction and operation of the proposed facilities. The following analysis evaluates if the Project would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of the standards established in:
    - City of Monterey Park Municipal Code (MPMC) Section 4.50.080 (Sound Level Limits – Established) or Section 4.50.100 (Sound Level Limits – Exceptions); or
    - The City of Monterey Park General Plan; or
- Generate excessive groundborne vibration or groundborne noise levels; or
- Expose people residing or working in the Project area to excessive airport-related noise levels.

With regard to item a), the City's Municipal Code and General Plan Safety Element establish the following standards applicable to construction noise, operational noise, and noise/land use compatibility.

- *Construction Noise*: Municipal Code Section 4.50.100 exempts construction activity from noise regulations between the hours of 7:00 AM and 7:00 PM on Monday through Friday, and the hours of 9:00 AM and 6:00 PM on Saturdays, Sundays, and holidays.
- *Operational Noise:* Municipal Code Section 4.50.080 establishes non-transportation noise source standards for noise-receiving land uses. These standards provide restrictions on the amount and duration of noise generated at a property, as measured

at the property line of the noise receiver. The Municipal Code prohibits noise generation exceeding the measured ambient noise level or the Code's presumed ambient noise levels for different receiving land use types, whichever is greater. The allowable ambient noise level for a residential land use, as set by the City's Municipal Code, are as follows:

- Daytime (7:00 AM – 10:00 PM): 55 dBA L_{eq}
- Nighttime (10:00 PM – 7:00 AM): 50 dBA L_{eq}

Municipal Code Section 4.50.090 adjusts these standards for noise disturbances containing a steady, audible tone, such as a whine, screech, beating, pulsating, throbbing, or hum by reducing the noise level limit by five decibels. This requirement would not apply to the proposed Project because it does not involve impulsive or steady-tone noise sources.

- *Noise/Land Use Compatibility*: The City's General Plan Safety Element establishes a noise land use compatibility goal for residential uses of 65 CNEL.

Increases in Ambient Noise Levels in Excess of Applicable Standards

Project Construction

The proposed Project involves construction activities including demolition, site preparation, grading, building construction, paving and architectural coating in an existing residential area of the City. Construction activities are anticipated to begin July 2023 and may last approximately 19 months in total. In general, construction activities would involve the use of worker vehicles, delivery trucks, dump trucks, and heavy-duty construction equipment such as (but not limited to) backhoes, tractors, loaders, graders, excavators, rollers, cranes, material lifts, generators, and air compressors. These types of construction activities would generate noise and vibration from the following sources:

- Heavy equipment operations at different work areas. Some heavy equipment would consist of mobile equipment such as a loader and excavator that would move around work areas; other equipment would consist of stationary equipment (e.g., cranes or material hoists/lifts) that would generally operate in a fixed location until work activities are complete. Heavy equipment generates noise from engine operation, mechanical systems, and components (e.g., fans, gears, propulsion of wheels or tracks), and other sources such as back-up alarms. Mobile equipment generally operates at different loads, or power outputs, and produces higher or lower noise levels depending on the operating load. Stationary equipment generally operates at a steady power output that produces a constant noise level.
- Vehicle trips, including worker, vendor, and haul truck trips. These trips would occur on South Alhambra Avenue and other local roads used to access the site.

Typical construction equipment noise levels at different distances are shown in Table 3, *Potential Project Construction Equipment Noise* Levels.

Table 3: Potential Project Construction Equipment Noise Levels

Typical Equipment	Noise Level at 50 feet (L_{max})(A)	Percent Usage Factor(B)	Predicted Equipment Noise Levels (L_{eq})(C)						
			25 Feet	50 Feet	75 Feet	100 Feet	150 Feet	200 Feet	250 Feet
Bulldozer	85	40	87	81	77	75	71	69	67
Backhoe	80	40	82	76	72	70	66	64	62
Compact Roller	80	20	79	73	69	67	63	61	59
Concrete mixer	85	40	87	81	77	75	71	69	67
Crane	85	16	83	77	74	71	67	65	63
Excavator	85	40	87	81	77	75	71	69	67
Generator	82	50	85	79	75	73	69	67	65
Pneumatic tools	85	50	88	82	78	76	72	70	68
Scraper	85	40	87	81	77	75	71	69	67
Delivery Truck	85	40	86	81	77	75	71	69	67

Sources: Caltrans, 2013 and FHWA, 2010.

(A) L_{max} noise levels based on manufacturer's specifications.

(B) Usage factor refers to the amount (percent) of time the equipment produces noise over the time period

(C) Estimate does not account for any atmospheric or ground attenuation factors. Calculated noise levels based on Caltrans, 2013: L_{eq} (hourly) = L_{max} at 50 feet – 20log (D/50) + 10log (UF), where: L_{max} = reference L_{max} from manufacturer or other source; D = distance of interest; UF = usage fraction or fraction of time period of interest equipment is in use.

With regard to construction noise, demolition, site preparation, and grading phases typically result in the highest temporary noise levels due to the use of heavy-duty equipment such as dozers, excavators, graders, loaders, scrapers, and trucks. Construction noise impacts generally occur when construction activities occur in areas immediately adjoining noise sensitive land uses, during noise sensitive times of the day, or when construction durations last over extended periods of time.

Construction activities associated with the proposed Project would last approximately 19 months. Construction activities would occur in in close proximity to adjacent residential properties. As shown in , worst case hourly L_{eq} and L_{max} construction equipment noise levels are predicted to be approximately 82 dBA L_{eq} and 85 dBA dBA L_{max}, respectively, at 50 feet; however, the magnitude of the Project's temporary and periodic increase in ambient noise levels would depend on the nature of the construction activity (i.e., demolition, building construction, grading) and the distance between the construction activity and sensitive receptors/outdoor use areas. Sensitive residential receptors could be within 25 feet of work areas for short periods of time (e.g., site grading along the property boundary), at which distance construction equipment may reach 88 dBA L_{eq}. Project construction in the middle of the site would be at least 100 feet from sensitive receptors to the north, east, and south. At this distance (100 feet), equipment could reach 76 dBA L_{eq}. The concurrent operation of a dozer, backhoe, and delivery truck at the same time and in the same general area could produce a combined noise level of approximately 80 dBA L_{eq} on a short-term basis (less than an hour) at 100 feet.

Although Project construction may temporarily increase noise levels near the site, it is not anticipated to result in physical harm (e.g., temporary or permanent hearing loss or damage) to any sensitive noise receptor because receptors would not be continuously exposed to elevated

construction noise levels (i.e., noise levels would return to ambient conditions when construction ceases for the day) and the construction noise levels presented above are exterior noise levels, whereas receptors would be likely to be inside buildings. Typical residential and commercial construction in California typically provides at least 12 dBA of exterior to interior noise attenuation with windows open and 20 dBA of exterior to interior noise attenuation with windows closed[1]. Physiological effects occur when the human ear is subjected to prolonged exposure to high noise environments. For example, to protect workers from noise-induced hearing loss, the U.S. Occupational Safety and Health Administration (OSHA) limits worker noise exposure to 90 dBA as averaged over an 8-hour time period (29 CFR 1910.95). Similarly, the National Institute for Occupational Safety and Health (NIOSH) recommends workers limit noise exposure to no more than 85 dBA over an 8-hour period to protect against noise-induced hearing loss (NIOSH, 1998). As shown in Table 3, potential worst-case hourly noise level estimates for any single piece of equipment would be approximately 88 dBA L_{eq} at 25 feet and 76 dBA L_{eq} at 100 feet. Although hourly construction noise levels may approach 88 dBA L_{eq} for one or two hours, such noise levels would not be sustained over an 8-hour period (due to movement of equipment and changes in operations that occur during daily construction activities). Therefore, at worst-case, noise from construction activities may pose a temporary interference or annoyance effect on nearby sensitive receptors but would not result in adverse physiological effects on human receptors in the surrounding area.

The City's Municipal Code (Section 4.50.100) limits construction activities to the hours of 7 AM to 6 PM, Monday to Friday, and 9 AM to 6 PM on Saturday, Sunday, and holidays; however, the neither the City's General Plan or Municipal Code establish a specific numeric noise standard (e.g., 90 dBA L_{eq}) for construction noise levels. As discussed above, the Project's potential construction noise levels would range from approximately 76 dBA L_{eq} to 88 dBA L_{eq} depending on the specific equipment in use and the distance between the equipment and adjacent residential properties. These noise levels would be approximately 16 dB to 30 dB above the existing ambient noise levels measured at the Project site (see Table 2). Although the City does not maintain a specific construction noise level standard, a temporary increase in noise levels of 16 dB to 30 dB would represent more than a quadrupling in loudness during peak noise generating activities. To reduce the potential for construction activities to result in a substantial temporary increase in ambient noise levels in the vicinity of the Project site, and to reduce effects on adjacent residential receptors, MIG recommends Mitigation Measure NOI-1 be incorporated into the Project:

Mitigation Measure NOI-1: Reduce Potential Project Construction Noise Levels

To reduce potential noise levels from Project construction activities, the Applicant shall:

1) *Notify Residential Land Uses of Planned Construction Activities.* This notice shall be provided at least two (2) weeks prior to the start of any construction activities, describe the noise control measures to be implemented by the Project, and include the name and phone number of the designated contact for the Applicant/Project representative and the City of Monterey Park responsible for handling construction-related noise complaints (per #5 below). This notice shall be provided to the

[1] The U.S. Department of Housing and Urban Development (HUD) Noise Guidebook and supplement (2009a, 2009b) includes information on noise attenuation provided by building materials and different construction techniques. As a reference, a standard exterior wall consisting of 5/8-inch siding, wall sheathing, fiberglass insulation, two by four wall studs on 16-inch centers, and 1/2-inch gypsum wall board with single strength windows provides approximately 35 dBs of attenuation between exterior and interior noise levels, provided windows do not occupy more than 30% of the exterior wall space.

owner/occupants of residential dwelling units within 500 feet of construction work areas.

2) *Restrict Work Hours:* All construction-related work activities, including material deliveries, shall be subject to the requirements of City Municipal Code Section 4.50.100. Construction activities, including deliveries, shall occur only during the hours of 7 AM to 7 PM Monday to Friday and 9 AM to 6 PM on Saturday, Sunday, and holidays. The Applicant/Project representative and/or its contractor shall post a sign at all entrances to the construction site information contractors, subcontractors, other workers, etc. of this requirement.
3) *Construction Equipment Selection, Use, and Noise Control Measures*: The following measures shall apply to construction equipment used at the Project site:
   a. Contractors shall use the smallest size equipment capable of safely completing work activities.
   b. Construction staging shall occur as far away from residential land uses as possible given site and active work constraints.
   c. Electric hook-ups shall be provided for stationary equipment (e.g., pumps, compressors, welding sets). If it is not feasible to provide an electric hook-up, the Applicant shall ensure mitigation measures 3a and 3d are implemented.
   d. All stationary noise generating equipment shall be shielded and located as far as possible from residential land uses given site and active work constraints. Shielding may consist of existing vacant structures or a three-or four-sided enclosure provided the structure/enclosure breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operation.
   e. Heavy equipment engines shall be equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, and be maintained in accordance with manufacturer's recommendations during active construction activities.
   f. Pneumatic tools shall include a suppression device on the compressed air exhaust.
   g. No radios or other amplified sound devices shall be audible beyond the property line of the construction site.
4) *Implement Construction Activity Noise Control Measures:* The following measures shall apply to Project construction activities:
      a. Demolition: Activities shall be sequenced to take advantage of existing shielding/noise reduction provided by existing buildings or parts of buildings and methods that minimize noise and vibration, such as sawing concrete blocks, prohibiting on-site hydraulic breakers, crushing or other pulverization activities, shall be employed during Project construction.
      b. Demolition, Site Preparation, Grading, and Foundation Work: During all demolition, site preparation, grading, and structure foundation work activities, a physical noise barrier shall be installed and maintained around the site perimeter to the maximum extent feasible given site constraints and access requirements. The noise barrier shall extend to a height of eight (8) feet above grade. Potential barrier options capable of reducing construction noise levels could include, but are not limited to:
         i. A concrete, wood, or other barrier installed at-grade (or mounted to structures located at-grade, such as a K-Rail), and consisting of a solid material (i.e., free of openings or gaps other than weep holes) that has a minimum rated transmission loss value of 20 dB.

   ii. Commercially available acoustic panels or other products such as acoustic barrier blankets that have a minimum sound transmission class (STC) or transmission loss value of 20 dB.
   iii. Any combination of noise barriers and commercial products capable of achieving required construction noise reductions during demolition, site preparation, grading, and structure foundation work activities.
   iv. The noise barrier may be removed following the completion of building foundation work (i.e., it is not necessary once framing and typical vertical building construction begins provided no other grading, foundation, etc. work is still occurring on-site).

5) *Prepare a Construction Noise Complaint Plan:* The Applicant shall prepare a Construction Noise Complaint Plan that shall:
   a. Identify the name and/or title and contact information (including phone number and email) for a designated Project and City representative responsible for addressing construction-related noise issues.
   b. Includes procedures describing how the designated Project representative will receive, respond, and resolve construction noise complaints.
   c. At a minimum, upon receipt of a noise complaint, the Project representative shall notify the City contact, identify the noise source generating the complaint, determine the cause of the complaint, and take steps to resolve the complaint.

Mitigation Measure NOI-1 would provide advanced notice of construction activities to surrounding residential properties, limit construction hours per City Municipal Code requirements, limit noise from stationary and other construction equipment, and reduce temporary construction noise impacts by a minimum of 5 to 10 dBs. The proposed Project would comply with the City's applicable construction noise control provisions and implement other mitigation measures to reduce the potential for Project construction activities to result in a substantial temporary increase in ambient noise levels. With Mitigation Measure NOI-1, temporary construction noise levels would be rendered a less-than-significant impact.

Project Operation (On-Site Noise Sources)

The Project site and surrounding properties to the north, east, and south are all designated High Density Residential (R-3) by the City's zoning code; properties to the west, across South Alhambra Avenue, are all designated as Medium Density Residential (R-2) by the City's zoning code. Municipal Code Section 4.50.080 establishes the maximum permissible noise level that may intrude into adjacent property lines. The code establishes maximum permissible noise levels for residential land uses of 55 dBA L_{eq} for daytime hours (7:00 AM to 10:00 PM) and 50 dBA L_{eq} for nighttime hours (10:00 PM – 7:00 AM). The existing daytime ambient noise levels at the Project site ranged from 55.6 to 59.2 dBA L_{eq}, which is above the City's permissible daytime noise levels (55 dBA L_{eq}). Nighttime (10 PM to 7 AM) noise levels are typically 5 to 10 dBA less due to reduced traffic volumes on adjacent roadways and less exterior neighborhood activity (e.g., less lawn maintenance, outdoor recreation) and thus are assumed to be below the City's permissible nighttime noise level (50 dBA L_{eq}).

The existing residential land uses at and near the site generate noise from vehicle parking activities, waste collection activities, landscaping activities, stationary heating, ventilation, and air conditioning (HVAC) equipment, and other residential activities (e.g., building maintenance). The proposed Project would involve similar noise generating sources and activities as the existing land uses; however, the amount of mechanical equipment and the intensity of parking would be greater than existing land uses at the site. Although the proposed Project could increase the amount of noise sources and noise-generating activities compared to existing

conditions, the Project would have a limited potential to generate significant on-site noise levels. In general, residential land uses (including the proposed multi-family condominium land uses) are not a substantial noise-generating land use because they do not involve substantial noise-generating activities during the nighttime, mechanical equipment associated with elevators, residential amenities, and other building systems are typically enclosed within closets, sheds, and/or equipment rooms, and HVAC equipment is typically screened from public view by landscaping, fences, or walls and, therefore, shielded from adjacent property lines.

Once constructed, the proposed Project's primary on-site noise generating activities will be parking, human activity, and HVAC equipment. The site design generally places most parking activities underground, with the housing units situated around the eastern, western, and southern perimeter of the site. This design shields parking and other interior site noise (e.g., use of the site's courtyard) from adjacent residential properties. Individual condominium balconies would face the perimeter of the site. Use of the balconies would result in human speech, laughter, and other sounds near property lines; however, in a quiet setting the average normal voice level is approximately 55 dBA and balcony use would not generate sustained noise levels above 50 dBA L_{eq} at any adjacent property line.

The Project's small rooftop HVAC units would be rated to condition individual condominium spaces that would be approximately 650 to 2,100 square feet in size. Small, individual residential HVAC units can produce a noise level up to 75 dBA at a distance of 3 feet. Based on distance attenuation, uncontrolled HVAC noise levels would reach 50 dBA at a distance of 54 feet. The roof plans for the proposed Project indicate HVAC equipment would be located closer than 54 feet from adjacent property lines (see attachment 01); individual units would be set back at least 30 feet from the southern property line (55 dBA uncontrolled HVAC noise level), 40 feet from the western property line (52.5 dBA uncontrolled HVAC noise level), 50 feet from the eastern property line (50.6 dBA uncontrolled HVAC noise level), and 55 feet from the northern property line (49.7 dBA uncontrolled HVAC noise level). Although some HVAC units could be closer than 54 feet from adjacent property lines, the units would be located approximately 41 feet above grade and fully screened and concealed behind a four-foot-tall parapet that would direct the sound upwards, increasing the distance the soundwave must travel to receptor locations and attenuating HVAC noise levels by at least 5 dBA. In addition, HVAC equipment does not operate continuously and would not affect ambient noise levels when the equipment is not in use. For these reasons, potential HVAC equipment would not generate noise levels in excess of the City's 50 dBA L_{eq} nighttime noise standard at any shared residential property line, or otherwise result in a substantial permanent increase in ambient noise levels in the vicinity of the Project.

For the reasons outlined above, the proposed Project would not generate on-site noise levels that exceed City standards or otherwise result in a substantial permanent increase in ambient noise levels in the vicinity of the Project. This impact would be less than significant.

Project Operation (Off-Site Vehicle Trip Noise)

The Transportation Study Screening Analysis prepared for the proposed Project identifies that the proposed Project is estimated to result in a net increase of 331 daily vehicle trips (Ganddini Group, 2023). In general, it takes a doubling of traffic to increase traffic noise volumes by 3 dBA (Caltrans, 2013). Although the current average daily traffic volume on South Alhambra Avenue is not known, the area surrounding the Project site is developed with residential land uses and traffic volumes on South Alhambra Avenue and other roadways used to access the Project site are assumed to be at least 1,000 vehicle trips per day. The addition of 308 passenger cars to the roadway system would not result in a doubling of traffic on any roadway segment at or in the vicinity of the Project site and, therefore, would result in a less than 3 dBA increase in noise

levels on local roads used to access the Project site. The proposed Project, therefore, would not result in a substantial, permanent increase in noise levels along the roadways used to access the proposed Project as compared to existing or future conditions. This impact would be less than significant.

Project Operation (Consistency with General Plan Policies)

The City's General Plan Safety Element includes goals and policies that minimize the impact of construction and point noise sources throughout the City. For example, General Plan Safety and Community Services Element Policy 12.1 requires the City to continue to enforce its noise ordinance to control point source noise and Policy 12.2 requires the City to incorporate noise impact considerations into the development review process, ensuring City standards are addressed during Project design and development. In addition, Policy 12.3 specifically requires new multi-family residential developments to incorporate design features to minimize intrusion of ambient noise into private and common outdoor spaces. Finally, Policy 12.4 requires the City to enforce and city ordinances regulating hours of construction activity. The proposed Project would be consistent with these General Plan policies because it would not result in on- or off-site noise levels that exceed Municipal Code requirements for residential land uses and would comply with the Municipal Code's permissible construction work periods.

Other Planning Considerations (Noise / Land Use Compatibility)

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." Per this ruling, a Lead Agency is not required to analyze how existing conditions might impact a project's existing or future population except where specifically required by CEQA; however, a Lead Agency may elect to disclose information relevant to a project even if it not is considered an impact under CEQA. Furthermore, the City's General Plan sets noise standards for receiving land uses which require evaluation for consistency and compliance even if such evaluation is not required by CEQA to be identified as a physical impact of a project.

The City's General Plan Safety Element establishes a noise and land use compatibility goal for residential uses of 65 CNEL. Noise monitoring conducted at the Project site in 2018 (see Table 2) indicates daytime hourly ambient noise levels at the site ranged from approximately 55 to 59 dBA L_{eq}. These daytime noise levels are less than 60 dBA. Daily noise exposure at the Project is, therefore, considered to be within the City's noise and land use compatibility goal of 65 CNEL. In addition, interior noise exposure would be less than 45 CNEL with windows closed and use of the Project's HVAC system. Therefore, the proposed Project is considered compatible with the exterior ambient noise environment in the Project area and no exterior or interior noise design features are required for the Project.

Groundborne Vibration

Vibration is the movement of particles within a medium or object such as the ground or a building. Vibration sources are usually characterized as continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency; however, unlike airborne sound, there is no standard way of measuring and reporting amplitude. Vibration amplitudes can be expressed in terms of velocity (inches per second) or discussed in dB units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are usually discussed in terms of peak particle velocity (PPV) in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for building damage. Vibration can impact people, structures, and

sensitive equipment. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments, such as electron microscopes. Groundborne noise is noise generated by vibrating building surfaces such as floors, walls, and ceilings that radiate noise inside buildings subjected to an external source of vibration. The vibration level, the acoustic radiation of the vibrating element, and the acoustical absorption of the room are all factors that affect potential groundborne noise generation.

Caltrans' Transportation and Construction Vibration Guidance Manual provides a summary of vibration human responses and structural damage criteria that have been reported by researchers, organizations, and governmental agencies (Caltrans, 2020). These thresholds are summarized in Table 4, *Caltrans' Vibration Threshold Criteria for Building Damage,* and Table 5, *Caltrans' Vibration Threshold Criteria for Human Response*.

Table 4: Caltrans' Vibration Threshold Criteria for Building Damage

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.12 to 0.2
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50

Source: Caltrans, 2020

Table 5: Caltrans' Vibration Threshold Criteria for Human Response

Human Response	Maximum PPV (in/sec)	
	Transient	Continuous
Slightly perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severe/Disturbing	2.0	0.7 (at 2 Hz) to 0.17 (at 20 Hz)
Very disturbing	--	3.6 (at 2 Hz) to 0.4 (at 20 Hz)

Source: Caltrans, 2020

Construction activities have the potential to result in varying degrees of ground vibration, depending on the specific construction equipment used and activities involved. Vibration generated by construction equipment spreads through the ground and diminishes with increases in distance. The effects of ground vibration may be imperceptible at low levels, result in low rumbling sounds and detectable vibrations at moderate levels, and can disturb human activities such as sleep and vibration sensitive equipment at high levels. Ground vibration can also potentially damage the foundations and exteriors of existing structures even if it does not result in a negative human response. Pile drivers and other pieces of high impact construction equipment are generally the primary cause of construction-related vibration impacts. The use of such equipment is generally limited to sites where there are extensive layers of very hard materials (e.g., compacted soils, bedrock) that must be loosened and/or penetrated to achieve grading and foundation design requirements. The need for such methods is usually determined

through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with foundation design recommendations and the construction methods needed to safely permit development of a site. Pile driving equipment is not anticipated to be required at the proposed Project site.

Construction vibration impacts generally occur when construction activities occur in close proximity to buildings and vibration-sensitive areas, during evening or nighttime hours, or when construction activities last extended periods of time. Although potential heavy equipment operations at the site for all demolition, site preparation, grading, and paving activities would not last more than approximately 45 days, construction activities would occur in close proximity to adjacent residential properties. The ground-borne vibration levels generated by the type of equipment that would be used to construct the proposed Project are shown in Table 6*, Potential Project Construction Vibration Levels*.

Table 6: Potential Project Construction Vibration Levels

Equipment	Peak Particle Velocity (in/sec) (A)			
	25 feet	50 feet	100 feet	200 feet
Small bulldozer	0.003	0.001	0.001	0.000
Jackhammer	0.035	0.016	0.008	0.004
Loaded truck	0.076	0.035	0.017	0.008
Large bulldozer	0.089	0.042	0.019	0.009
Vibratory Roller	0.21	0.098	0.046	0.021

Sources: Caltrans, 2020 and FTA, 2018

(A) Estimated PPV calculated as: PPV(D)=PPV(ref)*(25/D)^1.1 where PPV(D)= Estimated PPV at distance; PPVref= Reference PPV at 25 ft; D= Distance from equipment to receiver; and n= ground attenuation rate (1.1 for dense compacted hard soils).

As shown in Table 6, the vibration levels associated with typical construction equipment are dependent on the type of equipment used. For structural damage, the use of typical equipment during construction activities (e.g., bulldozer, jack hammer, trucks etc.) would produce PPV levels up to 0.098 in/sec at 50 feet. These PPV values are well below Caltrans' guidelines standards for potential structural damage for the types of buildings in and adjacent to the Plan Area, which consist of modern residential structures (0.5 PPV for continuous vibration sources; see Table 4). For human annoyance and interference responses, the use of typical equipment (e.g., bulldozer, jack hammer, trucks, etc.) during construction could produce vibration levels near the Project site (within 50 feet) that exceed Caltrans' perceptible vibration detection threshold (0.012 PPV, see Table 5). Specific vibration-generating equipment, such as vibratory rollers which may be used during paving activities, could produce vibration levels at 50 feet that would be more pronounced and perceptible but still far below Caltrans' guidelines for structural damage to modern residential structures (0.50 PPV for continuous vibration sources).

The above vibration estimates represent potential vibration levels based on typical equipment operations and assume there is no change in elevation between work areas and receptor locations and no change in subsurface conditions that may affect vibration transmission through soil media and structures. As discussed above, the proposed Project does not have the potential to result in structural damage to buildings near work areas; however, construction-related groundborne vibrations have the potential to be perceptible at buildings within

approximately 200 feet of typical construction work areas and 400 feet of construction work areas involving a vibratory roller. Although some vibration associated with construction activities may be felt by nearby residential properties that surround the site, this potential vibration effect would not be excessive because it would occur during daytime hours only (when residential properties would be less sensitive to perceived vibrations, be infrequent (occurring only when equipment is in full operation, not idling or in low power modes), be intermittent (equipment would not operate in the same location every day and would move around the site so that properties are not exposed to continuous peak vibration levels), and would not damage buildings or structures at any point. For these reasons, Project construction activities would not generate excessive groundborne vibration or noise levels. This impact would be less than significant.

Once operational, the proposed Project would not have any large equipment that would generate vibration. This impact would be less than significant.

Airport-Related Noise

The proposed Project is not located within two miles of any public or private airport or within an airport land use plan. The closest airport facility, San Gabriel Valley Airport is located approximately 5.1 miles east of the Project site. Noise from overhead flights was observed during the ambient noise monitoring conducted for the Project, and the City's General Plan indicates outbound flights from Los Angeles International Airport (LAX) are known to fly over the middle of the city. LAX is located approximately 17.1miles southwest of the Project site. This intermittent aircraft related noise is not considered excessive. The Project would increase the number of residential units below flight paths; however, these units would not be exposed to excessive airport-related noise levels as evidenced by hourly ambient noise levels below 60 dBA L_{eq} (see Table 2). The City's General Plan Safety Element establishes the City's overall goal and intent to reduce aircraft noise impacts on Monterey Park residents and businesses by working with surrounding jurisdictions to improve aircraft noise standards and restricting helipad locations. The implementation of these General Plan policies (Policy 14.1 and 14.2) would also help ensure potential airport and heliport noise would not be excessive at the Project site. This impact would be less than significant.

CONCLUSION

As described in this memo, the proposed Project would not generate temporary or permanent noise levels that would exceed the City's standards or otherwise result in a substantial increase in ambient noise levels with the incorporation of mitigation measures, would not generate excessive groundborne vibration or groundborne noise levels, and would not expose people residing or working in the Project area to excessive aircraft noise levels. The proposed Project, therefore, would not result in a substantial, adverse noise-related effect on the environment.

REFERENCES

The following references were used to prepare this memorandum:

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U.S. Federal Highway Administration (FHWA) 2010. "Construction Noise Handbook, Chapter 9 Construction Equipment Noise Levels and Ranges: <https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook00.cfm>

U.S. Federal Transit Administration (FTA) 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. Prepared by John A. Volpe National Transportation Systems Center. Washington, DC. September 2018.

U.S. HUD. 2009a.HUD Noise Guidebook. Prepared by the Environmental Planning Division, Office of Environment and Energy. March 2009.

_____2009b. HUD Noise Guidebook, Chapter 4 Supplement: Sound Transmission Class Guidance. Prepared by the Environmental Planning Division, Office of Environment and Energy. March 2009.

CD/WD

Attachment 1

Project Site Plan and Roof Plan

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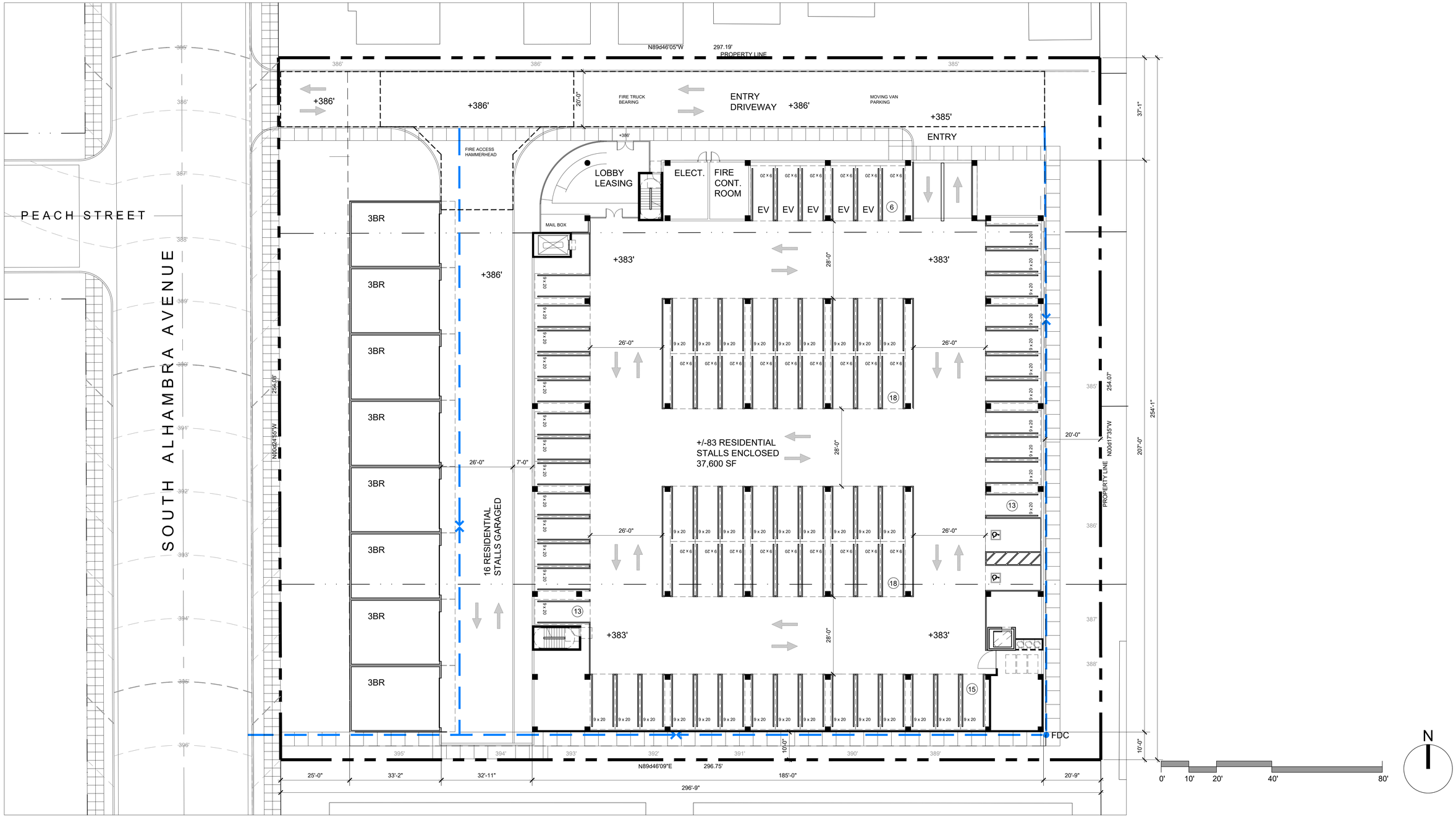
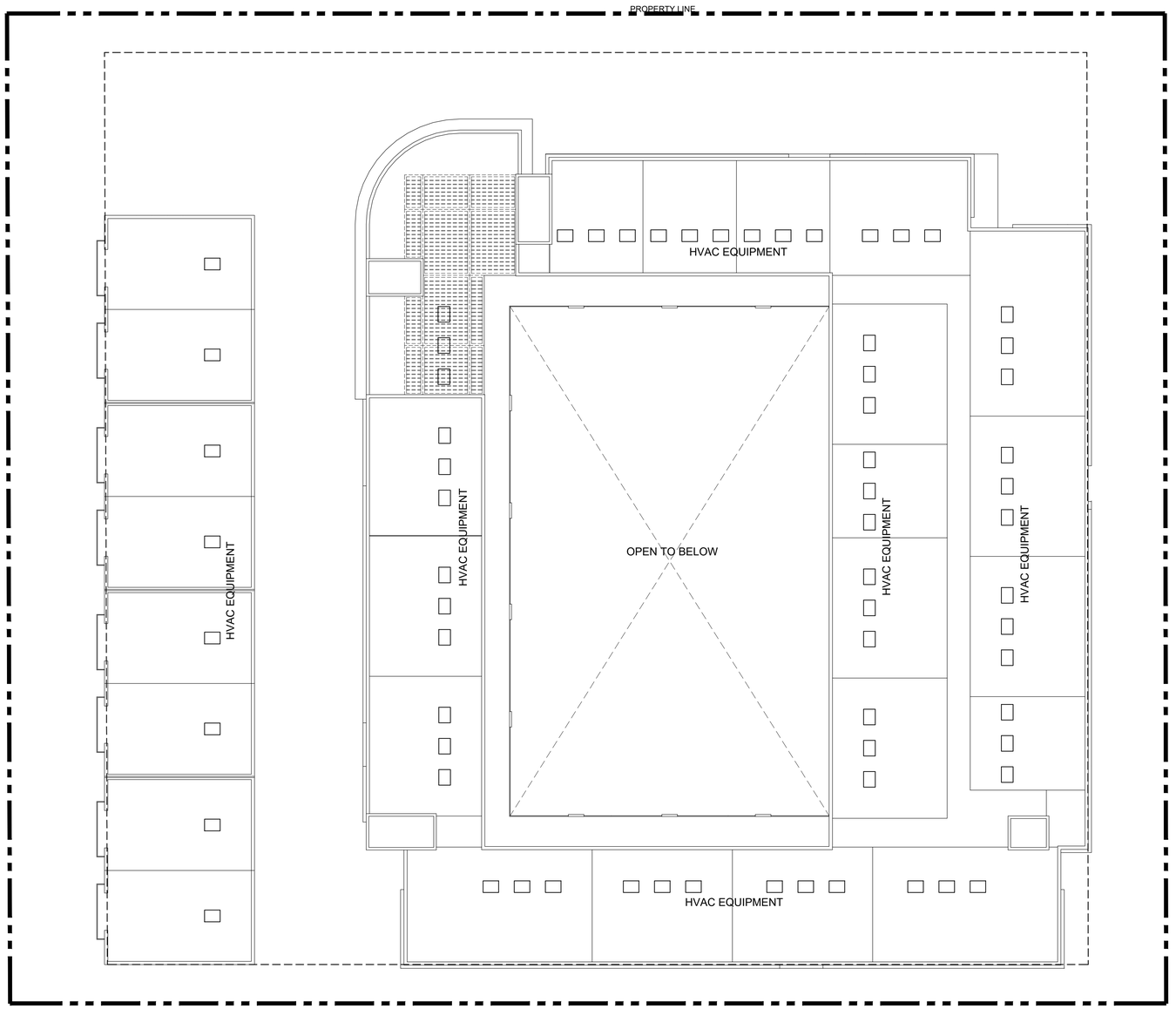


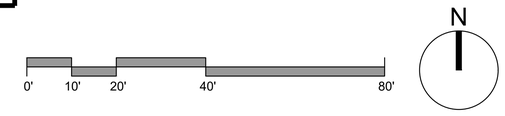
CONCEPTUAL DESIGN

MULTI-FAMILY CONDOMINIUM

TAG DESIGN WORKS

SITE PLAN | A1.0





CONCEPTUAL DESIGN

MULTI-FAMILY CONDOMINIUM

TAG DESIGN WORKS

FLOOR PLAN: ROOF

A1.5

Attachment 2

Noise Background

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ENVIRONMENTAL NOISE BACKGROUND

Noise may be defined as loud, unpleasant, or unwanted sound. The frequency (pitch), amplitude (intensity or loudness), and duration of noise all contribute to the effect on a listener, or receptor, and whether the receptor perceives the noise as objectionable, disturbing, or annoying.

The Decibel Scale (dB)

The decibel scale (dB) is a unit of measurement that indicates the relative amplitude of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a tenfold increase in acoustic energy, while 20 dBs is 100 times more intense, 30 dBs is 1,000 more intense, and so on. In general, there is a relationship between the subjective noisiness, or loudness of a sound, and its amplitude, or intensity, with each 10 dB increase in sound level perceived as approximately a doubling of loudness. Due to the logarithmic basis, decibels cannot be directly added or subtracted together using common arithmetic operations:

$$50\ decibels + 50\ decibels\ \neq 100\ decibels$$

Instead, the combined sound level from two or more sources must be combined logarithmically. For example, if one noise source produces a sound power level of 50 dBA, two of the same sources would combine to produce 53 dB as shown below.

$$10 * \ 10\ log\left(10^{\left(\frac{50}{10}\right)} + \ 10^{\left(\frac{50}{10}\right)}\right) = 53\ decibels$$

In general, when one source is 10 dB higher than another source, the quieter source does not add to the sound levels produced by the louder source because the louder source contains ten times more sound energy than the quieter source.

Sound Characterization

There are several methods of characterizing sound. The most common method is the "A-weighted sound level," or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is typically most sensitive. Thus, most environmental measurements are reported in dBA, meaning decibels on the A-scale.

Human hearing matches the logarithmic A-weighted scale, so that a sound of 60 dBA is perceived as twice as loud as a sound of 50 dBA. In a quiet environment, an increase of 3 dB is usually perceptible, however, in a complex noise environment such as along a busy street, a noise increase of less than 3 dB is usually not perceptible, and an increase of 5 dB is usually perceptible. Normal human speech is in the range from 50 to 65 dBA. Generally, as environmental noise exceeds 50 dBA, it becomes intrusive and above 65 dBA noise becomes excessive. Nighttime activities, including sleep, are more sensitive to noise and are considered affected over a range of 40 to 55 dBA.

Sound levels are typically not steady and can vary over a short time period. The equivalent noise level (L_{eq}) is used to represent the average character of the sound over a period of time. The L_{eq} represents the level of steady noise that would have the same acoustical energy as the sum of the time-varying noise measured over a given time period. L_{eq} is useful for evaluating shorter time periods over the course of a day. The most common L_{eq} averaging period is hourly, but L_{eq} can describe any series of noise events over a given time period.

Variable noise levels are values that are exceeded for a portion of the measured time period. Thus, L_{01} is the level exceeded one percent of the time and L90 is the level exceeded 90 percent of the time. The L_{90} value usually corresponds to the background sound level at the measurement location.

Noise exposure over the course of an entire day is described by the day/night average sound level, or DNL (also referred to as L_{dn}), and the community noise equivalent level, or CNEL. Both descriptors represent the 24-hour noise impact on a community. For DNL, the 24-hour day is divided into a 15-hour daytime period (7 AM to 10 PM) and a nine-hour nighttime period (10 PM to 7 AM) and a 10 dB "penalty" is added to measure nighttime noise levels when calculating the 24-hour average noise level. For example, a 45-dBA nighttime sound level would contribute as much to the overall day-night average as a 55-dBA daytime sound level. The CNEL descriptor is similar to DNL, except that it includes an additional 5 dBA penalty beyond the 10 dBA for sound events that occur during the evening time period (7 PM to 10 PM). The artificial penalties imposed during DNL and CNEL calculations are intended to account for a receptor's increased sensitivity to sound levels during quieter nighttime periods.

Sound Propagation

environment as the sound wave spreads out and travels away from the noise generating source. Theoretically, the sound level of a point source attenuates, or decreases, by 6 dB with each doubling of distance from a point source. Sound levels are also affected by certain environmental factors, such as ground cover (asphalt vs. grass or trees), atmospheric absorption, and attenuation by barriers. Outdoor noise is also attenuated by the building envelope so that sound levels inside a residence are from 10 to 20 dB less than outside, depending mainly on whether windows are open for ventilation or not.

For an ideal "point" source of sound, the energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out in a spherical pattern and travels away from the point source. Theoretically, the sound level attenuates, or decreases, by 6 dB with each doubling of distance from the point source. The change in noise levels between two distances can be calculated according to Equation 1 (California Department of Transportation (Caltrans), 2013a) as follows:

Equation 1

$$dBA2 = dBA1 + 20\log (D1/D2)$$

Where:

dBA1 = Known noise level, such as a reference noise level
D1 = Distance associated with dBA1
dBA2 = Noise level at distance 2
D2 = Distance associated with dBA2

For an ideal line source of sound, the energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out in a cylindrical pattern from the source. Theoretically, the sound level attenuates, or decreases, by 3 dB with each doubling of distance from the line source. The change in noise levels between two distances can be calculated according to Equation 2 as follows:

Equation 2

$$dBA2 = dBA1 + 10\log (D1/D2)$$

Where:

dBA1 = Known noise level, such as a reference noise level
D1 = Distance associated with dBA1
dBA2 = Noise level at distance 2
D2 = Distance associated with dBA2

For noise sources that do not operate continuously (e.g., vehicles and trucks that travel on-site, park, and then cease to generate noise),the average, hourly noise level associated with variable (i.e., non-steady) noise source can be calculated using Equation 3 as follows:

Equation 3

$$\text{Hourly } L_{eq} = 10 * \text{Log } (P_h) * 10^{(Lp/10)}$$

Where:

P_h = Percentage or fraction of hour the noise is generated

L_p = The noise level generated during the partial hour (P_h)

Finally, the total combined sound pressure level from multiple, identical sources of noise at a receiver location can be calculated using Equation 4 as follows:

Equation 4

$$SPL_{Total} = SPL_1 + 10 * \text{Log } (N)$$

Where:

SPL_1 = Sound pressure level of one source

N = Number of identical sources to be added

Noise Effects on Humans

Noise effects on human beings are generally categorized as:

- Subjective effects of annoyance, nuisance, and/or dissatisfaction
- Interference with activities such as speech, sleep, learning, or relaxing
- Physiological effects such as startling and hearing loss

Most environmental noise levels produce subjective or interference effects; physiological effects are usually limited to high noise environments such as industrial manufacturing facilities or airports.

Predicting the subjective and interference effects of noise is difficult due to the wide variation in individual thresholds of annoyance and past experiences with noise; however, an accepted method to determine a person's subjective reaction to a new noise source is to compare it the existing environment without the noise source, or the "ambient" noise environment. In general, the more a new noise source exceeds the ambient noise level, the more likely it is to be considered annoying and to disturb normal activities.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness that would almost certainly cause an adverse response from community noise receptors.

When exposed to high noise levels, humans may suffer hearing damage. Sustained exposure to high noise levels (e.g., 90 dBs for hours at a time) can cause gradual hearing loss, which is usually temporary, whereas sudden exposure to a very high noise level (e.g., 130 to 140 dBs) can cause sudden and permanent hearing loss. In addition to hearing loss, noise can cause stress in humans and may contribute to stress-related diseases, such as hypertension, anxiety, and heart disease (Caltrans, 2013).

Vibration

Vibration is the movement of particles within a medium or object such as the ground or a building. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared, in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for building damage. Human response to groundborne vibration is subjective and varies from person to person.

Attachment 3

Ambient Noise Monitoring Data

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South Alhambra Avenue Multi-Family Condominium Project
Monterey Park, CA
Appendix: Ambient Noise Monitoring Data
Prepared by MIG, August 2018

Table 1: Summary of Site ST-1 Noise Monitoring Data								
Time	Duration	Leq	Lmin	Lmax	L(1)	L(10)	L(50)	L(90)
2:00	1-hour	59.2	36.9	81.4	71.8	60.6	51.2	42.0
3:00	1-hour	57.2	38.9	75.1	67.2	61.1	52.4	46.1
4:00	1-hour	58.0	39.3	78.7	69.7	61.2	51.4	43.6
5:00	1-hour	56.8	38.9	75.0	66.8	60.7	51.4	43.5
6:00	1-hour	55.6	40.0	70.0	64.2	60.4	50.3	43.7
Average		57.5	36.9	81.4	68.7	60.8	51.4	44.0

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	LxT_Data.154
User	jkanlund
Job Description	Noise Monitoring Short Term
Location	400 South Alhambra Short Term 1
Measurement Description	Riverside Meter - ST -South Alhambra Senior Housing Project
Start Time	Tuesday, 21 August 2018 14:00:00
Stop Time	Tuesday, 21 August 2018 19:00:04
Duration	05:00:04.7
Run Time	05:00:04.7
Pause	00:00:00.0
Pre Calibration	Monday, 20 August 2018 16:09:00
Post Calibration	None
Calibration Deviation	---

Note

South Alhambra Senior Housing Project

Overall Data

LASeq		57.5	dB
LASmax	21 Aug 2018 14:08:39	81.4	dB
LApeak (max)	21 Aug 2018 15:32:24	105.2	dB
LASmin	21 Aug 2018 14:07:20	36.9	dB
LCSeq		67.7	dB
LASeq		57.5	dB
LCSeq - LASeq		10.2	dB
LAIeq		60.0	dB
LAeq		57.5	dB
LAIeq - LAeq		2.5	dB
Ldn		57.5	dB
LDay 07:00-22:00		57.5	dB
LNight 22:00-07:00		---	dB
Lden		61.9	dB
LDay 07:00-19:00		57.5	dB
LEvening 19:00-22:00		62.4	dB
LNight 22:00-07:00		---	dB
LASE		100.1	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		104	
OBA Overload Duration		299.2	s

Statistics

LAS0.00	---	
LAS0.00	---	
LAS1.00	66.6	dBA
LAS10.00	60.8	dBA
LAS50.00	51.1	dBA
LAS90.00	42.6	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	102 / 404.5	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	25.4	dB
Under Range Peak	78.9	dB
Noise Floor	15.1	dB
Overload	122.6	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.1	6.3	24.5	40.4	43.4	47.9	50.7	53.1	49.7	44.5	37.7	29.0
LASmax	7.1	26.6	48.2	67.7	69.7	72.7	76.5	73.7	72.1	69.4	68.7	65.5
LASmin	7.1	5.1	9.3	22.6	27.2	28.5	29.1	30.5	26.0	20.8	14.6	7.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.9	2.4	1.6	1.2	0.9	3.2	12.4	17.0	23.3	28.6	34.1	38.9
LASmax	3.0	2.4	3.6	11.4	20.8	26.9	39.1	44.8	48.5	54.8	63.8	67.7
LASmin	3.0	2.4	1.6	1.1	0.2	-0.5	-1.7	0.6	6.6	12.0	15.2	19.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	36.7	39.3	39.3	40.9	42.8	44.9	45.1	45.6	46.9	47.6	48.6	48.7
LASmax	64.7	69.6	62.5	64.6	67.8	72.4	73.6	74.5	71.3	67.8	69.2	71.2
LASmin	19.4	21.9	22.3	22.3	24.3	22.3	22.9	24.0	25.1	25.9	26.1	24.2

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	46.9	44.2	42.9	41.4	39.9	36.9	33.9	33.4	31.0	25.8	19.4	25.4
LASmax	68.7	67.3	67.2	66.9	65.3	63.6	59.8	68.7	64.7	58.7	49.5	65.7
LASmin	22.7	20.7	19.3	17.7	15.7	12.8	10.8	9.8	7.5	4.8	1.9	-1.5

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	20 Aug 2018 16:09:00	-28.9
PRMLxT1L	29 Jun 2018 10:05:36	-28.9
PRMLxT1L	27 Jun 2018 10:56:53	-28.8
PRMLxT1L	03 Oct 2017 12:52:52	-28.8
PRMLxT1L	21 Dec 2016 07:07:41	-28.0
PRMLxT1L	27 Jan 2016 10:21:19	-28.9
PRMLxT1L	26 Jan 2016 14:23:09	-28.9
PRMLxT1L	26 Jan 2016 14:20:57	-28.1
PRMLxT1L	17 Nov 2015 09:56:46	-28.9
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0

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Cal Land Engineering, Inc.
dba Quartech Consultants
Geotechnical, Environmental, and Civil Engineering

August 17, 2016

The Commons MPK, LLC
602 Fairview Avenue, Apt. 15
Arcadia, California 91007

Attention: Mr. Gary Lai

Subject: Limited Phase I Environmental Site Assessment, 338-408 S. Alhambra Avenue, APN: 5259-004-036, and 037, Monterey Park, California, CLE Project No.: 16-023-095ESA

Gentlemen:

In accordance with your request, CLE has completed a Limited Phase I Environmental Site Assessment for the subject site. The objective of this assessment is to assess the likelihood of hazardous materials that may present at the site due to historical and/or present operations at the site, as well as the potential impacts due to the activities at the site vicinity.

Based on researched information, it is concluded that there is low potential of non-agricultural hazardous materials present in the shallow subsurface soil.

Additional assessment is not recommended at this time. Any future development, such as change use of the facility, or use of the groundwater, should be reviewed by an experienced environmental consultant.

We appreciate this opportunity to be of services. Should you have any questions pertaining to this report, please call the undersigned.

Sincerely,

Cal Land Engineering, Inc. (CLE)
dba Quartech Consultants (QCI)

Jack C. Lee, PE, GE, REA
Principal Engineer

Abe Kazemzadeh
Project Engineer

Dist: (3) Addressee

LIMITED PHASE I

ENVIRONMENTAL SITE ASSESSMENT

AT

338-408 S. Alhambra Avenue
APN: 5259-004-036, & 037
Monterey Park, California 91755

FOR

THE COMMONS MPK, LLC
602 FAIRVIEW AVENUE, APT. 15
ARCADIA, CALIFORNIA 91007

CONDUCTED
BY

CAL LAND ENGINEERING, INC.
CLE Project No.: 16-023-095ESA

August 17, 2016

TABLE OF CONTENT

1.0 INTRODUCTION

1.1 Site Location

This report presents a summary of our Limited Phase I Environmental Site Assessment for the subject property. The property consists of 14 residential units. The Property addresses are 338, 400, and 408 S. Alhambra Avenue, APN: 5259-004-036, and 037, Monterey Park, California.

1.2 Purpose

The purpose of this assessment is to review existing environmental conditions, and to evaluate potential environmental hazards that may exist at the subject site due to present and historical onsite.

1.3 Scope of Work

The following limited scopes of work were conducted for this environmental assessment:

1. Site Reconnaissance
2. Drive-by survey of the subject property and its surrounding area
3. Review of Historical City Directories
4. Review of Sanborn Maps
5. Review of available historical information of the subject property and its surrounding area to assess past uses that may contribute to potential environmental impacts.
6. Review available information of regional geology and hydrogeology literatures regarding underlying geologic conditions and groundwater regime in the vicinity of the subject property.
7. Review of available California State and US Federal databases to determine if leaking underground storage tanks, hazardous waste generators, Superfund sites, landfills, and other documented hazardous releases may have existed within approximately 1 mile of the subject property. The review data includes US Environmental Protection Agency, US Geology Survey, California Department of Toxic Substances Control, California Department of Conservation, Division of Oil and Gas, City of Monterey Park, Department of Building and Safety, Environmental Data Resources (City Directories, Governmental Listing, Sanborn Maps).
8. Preparation of this report to include a finding summary of this assessment and its conclusions, and recommendations for further investigations.

It should be noted that the sampling and analysis of soils, groundwater, and/or building materials was not in this scope of work of this report.

2.0 SITE CONDITION

A CLE field investigator performed a site reconnaissance on August 15, 2016. The project site is located at the east side of Alhambra Avenue, a relatively short distance south of Newmark Avenue, in the City of Monterey Park, California. The total property size is 56,562 square feet (1.3 acres). The site is relatively flat and it is occupied by existing 14 residential units.

The site addresses are 338A and 338B S. Alhambra Avenue, APN: 5259-004-036, 400 S. Alhambra Avenue and 408 S. Alhambra Avenue, APN: 5259-004-037. Building coordinates for 338 S, Alhambra Avenue are 34.058302 degrees Latitude and –118.116168 degrees Longitude and Building coordinates for 400 and 408 S, Alhambra Avenue are 34.05804 degrees Latitude and –118.116167 degrees Longitude.

There are two 1-story residential buildings with garages located at 338A and 338B S. Alhambra Avenue, which is located in front of Peach Street. These two buildings were built in 1950. The total area of the building is 1,516 square feet and the total area of the lot (APN: 5259-004-036) is 18, 894 square feet (0.434 acres).

There are 10 apartment buildings with garages located at 400 S. Alhambra Avenue and a 2 other buildings with garages located at 408 S. Alhambra Avenue. The buildings for these 2 addresses were built in 1949. The total area of the buildings is 9,976 square feet and the total area of the lot (APN: 5259-004-036) is 37, 668 square feet (0.865 acres). There are concrete driveways between and along side of the buildings. No aboveground or underground storage tanks were observed during our initial site reconnaissance.

3.0 HISTORICAL DOCUMENT REVIEW

3.1 Sanborn Map Review

No Sanborn fire insurance map was identified for the subject site.

3.2 City of Monterey Park, Department of Building and Safety

CLE representative visited the City of Monterey Park Building and Safety Department on August 15, 2016. There were no significant information related to the site except few electrical repair and roofing repair documents and a building permit application. Building Permit Letter is attached. No aboveground or underground storage tanks were reported in any of the City Documents.

3.3 City Directory

Business directories were reviewed at approximately five years intervals for the year spanning 1920 through 2013. The following table presents a summary of the reviewed directory.

ADDRESS
338 S. Alhambra Avenue
Monterey Park, CA 91755
S ALHAMBRA AVE
338 S ALHAMBRA AVE
2006 SADOFSKI Paul Haines Company
1975 STAYTON C L Pacific Telephone
1957 BROWN ROBT Pacific Telephone

400 S ALHAMBRA AVE
2006 VARGAS Luis Haines Company, DELOSSANTOS Haines Company, E NGUY Hoa Vinh Haines Company, Anthony, JULIUS Edna Haines Company, VARGAS Luis Haines Company, DELOSSANTOS Haines Company, Anthony JULIUS Edna Haines Company, E NGUY Hoa Vinh Haines Company
1999 GOLDBERG M Haines Company, GOLDBERG M Haines Company
1995 GOLDBERG M Pacific Bell, CERDA CHRISTINA L Pacific Bell, CERDA CHRISTINA L Pacific Bell, GOLDBERG M Pacific Bell
1985 WEI KE LIAO Pacific Bell, TORRES ROSA E Pacific Bell, TORRES ROSA E Pacific Bell, BROWN IONE Pacific Bell HIRASUNA ALAN Pacific Bell, LEONE ROSE M Pacific Bell
1985 WEI KE LIAO Pacific Bell, TORRES ROSA E Pacific Bell. TORRES ROSA E Pacific Bell, HIRASUNA ALAN Pacific Bell BROWN IONE Pacific Bell, LEONE ROSE M Pacific Bell
1975 LEONE ROSE M Pacific Telephone, WAGNER JACOB JACK Pacific Telephone, BROWN IONE Pacific Telephone WAGNER JACOB JACK Pacific Telephone, LEONE ROSE M Pacific Telephone, BROWN IONE Pacific Telephone
1966 WILKINS G J Pacific Telephone, WESTMORELAND ROBT C Pacific Telephone, SEMAIN DENISE M Pacific Telephone JARRETT FANT A Pacific Telephone, LEONE ROSE M Pacific Telephone, NEWTON GEO W Pacific Telephone, ACOSTA GILBERT Pacific Telephone, GONZALEZ RICHARD R Pacific Telephone' GRIFFITH MARY Pacific Telephone, WILKINS G J Pacific Telephone, ACOSTA GILBERT Pacific Telephone, GONZALEZ RICHARD R Pacific Telephone
JARRETT FANT A Pacific Telephone, GRIFFITH MARY Pacific Telephone, WESTMORELAND ROBT C Pacific Telephone SEMAIN DENISE M Pacific Telephone, NEWTON GEO W Pacific Telephone, LEONE ROSE M Pacific Telephone
1957 BUCCARELLI EUGENE H Pacific Telephone, BUCCARELLI EUGENE H Pacific Telephone

408 S ALHAMBRA AVE
2008 CHISHOLM FAMILY LIMITED PARTNER Cole Information Services, CHISHOLM FAMILY LIMITED PARTNER Cole Information Services, CHISHOLM FAMILY LIMITED PARTNER Cole Information Services, CHISHOLM FAMILY LIMITED PARTNER Cole Information Services
2006 CHISHOLM Roger F Haines Company, CHISHOLM Roger F Haines Company
1999 CHISHOLM Roger F Haines Company, CHISHOLM Roger F Haines Company
1985 CHISHOLM ROGER F Pacific Bell, CHISHOLM ROGER F Pacific Bell
1975 CHISHOLM ROGER F Pacific Telephone, CHISHOLM ROGER F Pacific Telephone
1960 CHISHOLM ROGER F Pacific Telephone, CHISHOLM ROGER F Pacific Telephone
1957 CHISHOLM ROGER F R Pacific Telephone, CHISHOLM ROGER F R Pacific Telephone
1950 CHISHOLM ROGER F R Pacific Telephone, CHISHOLM ROGER F R Pacific Telephone, CHISHOLM ROGER F R Pacific Telephone, CHISHOLM ROGER F R Pacific Telephone

ADJOINING PROPERTY DETAIL
410 S ALHAMBRA AVE
2006 CONTRERAS Haines Company
2006 Bemabe Haines Company, CONTRERAS Haines Company, Bemabe Haines Company
1975 CONTRERAS BERNABE M Pacific Telephone, CONTRERAS BERNABE M Pacific Telephone
1966 LUTZ WM D Pacific Telephone, LUTZ WM D Pacific Telephone
1960 LUTZ WM D Pacific Telephone, LUTZ WM D Pacific Telephone
1957 LUTZ WM D Pacific Telephone, LUTZ WM D Pacific Telephone
1950 LUTZ WM D R Pacific Telephone, LUTZ WM D R Pacific Telephone, LUTZ WM D R Pacific Telephone, LUTZ WM D R Pacific Telephone

4.0 AREA GEOLOGY AND HYDROGEOLOGY

4.1 Soil/Geology

Typical deposits of alluvial fans, plains, and terraces in the Los Angeles County characterize the underlying soils.

4.2 Groundwater

In accordance with CSG (previously CDMG), Historically Highest Ground Water Contours and Borehole Log Data Locations, El Monte Quadrangle Open File, Report 98-15, the historically highest groundwater of the area is approximately 75 feet below the existing ground surface.

5.0 OTHER ENVIRONMENTAL CONCERNS

5.1 Asbestos

Asbestos-containing materials were used in many commercial products since early this century. Its use had peaked in the period between World War II and the 1970s. However, based on information obtained from manufacturers represented by the US Consumer Product Safety Commission, it is unlikely that asbestos-containing materials were commercially used since late 1970s. Based on the reviewed documents, it is our understanding that the existing buildings were constructed in 1949 and 1950. It is recommended that the potential of the presence of ACM should be evaluated prior to any building construction and remodeling.

5.2 Radon Occurrence

Radon is a naturally occurring radioactive gas. It cannot be seen, smelled, or tasted and is the product of the natural radioactive decay of uranium. Radon is found most frequently in high concentrations in soils and rocks containing uranium, granite, shale, phosphate, and pitchblende. Radon may also be found in soils that are contaminated by certain types of industrial waste, such as by-products of uranium or phosphate mining waste. The site is underlain by soil deposits of alluvial fans, plains, and terraces of the Los Angeles Basin. It is CLE's opinion that the potential of high concentration radon occurring at the site is remote.

5.3 Petroleum Activities

The California Department of Conservation, Division of Oil and Gas and Geothermal Resources (DOGGR) regulates the drilling, operation, and abandonment of gas and oil wells throughout the California. DOGGR will require the site plan prior to the city issuing the building permit if the active, idle, or abandoned wells are located on or adjacent to the property. All abandoned oil wells must comply with the current regulatory standards. Based on our review of the Munger Map Book of the California Oil and Gas Field, no oil wells are located on the subject property or any adjacent properties.

6.0 GOVERNMENT RECORDS SEARCH

A government records search conducted for the subject site. The records search was conducted by Environmental Data Resources, Inc. (EDR) to identify potentially contaminated properties located within one-mile radius of the referenced site. Based on EDR Radius Map Records, the one-mile radius was selected as the maximum distance that existing contamination might migrate or transport to the project site. Results of the government records search are provided in Appendix A, which lists the entire recorded contaminated site. A brief discussion of the contaminated sites is also presented below, as based on information provided by EDR.

6.1 NPL

Under the US Federal EPA's CERCLA program (also known as the Superfund Program), EPA will identify and compile a list of all potential hazardous substances release sites (CERCLIS). Once on CERCLIS, the site will be assessed by the EPA, or appropriate state agencies, to determine necessary actions to be taken, if any. The inclusion of a site in the CERLCIS list does not necessarily confirm that the site poses a significant health or environmental threat. Once a site has been included in the CERCLIS, the EPA will use the Hazard Ranking System (HRS) to determine its potential risk to human health and/or environment. Only CERCLIS sites that present significant risk are included in the National Priority List (NPL). The record search indicates that there is no NPL site located within 1-mile radius of the subject site.

6.2 HIST CAL-SITES

This database contains both known and potentially hazardous substance sites. The database is maintained by the DTSC (TSCP – Toxic Substance Control Program) via interviews with officials from county health agencies, local fire departments, county agricultural commissioners, and other

agencies. Most contamination information is preliminary. Once the information (contamination) is confirmed, the site will be switched to AWP (Annual Workplan). A review of the Cal-Sites list revealed that there is no HIST Cal-Site located within 1 mile of the subject property.

6.3 CHMIRS

The California Hazardous Material Incident Report System contains information of reported hazardous material incidents, such as accidental spills or releases. The source is the California Office of Emergency Services. The record search indicates that there is no CHMIRS site located within 1 mile of the subject property.

6.4 CORTESE

This database includes sites of the following characteristics: public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic materials identified through the abandoned site assessment program, sites with USTs having a reportable releases, and all solid waste disposal facilities from which there is known migration. The record search indicates that there is no CORTESE site located within 0.5-mile radius of the subject site.

6.5 LUST

This database contains an inventory of leaking underground storage tank. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System. Based on the information provided by EDR, 1 LUST facility is located within 1/2 miles of the subject site.

6.6 UST

The Underground Storage Tank databases contain registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database. A review of the UST list, as provided by EDR, has revealed that there are no UST sites within approximately 1/4 miles of the subject property.

6.7 HAZNET

This database is extracted from the copies of hazardous waste manifests received each year by DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing

approximately 350,000-500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. A review of this database revealed that there is no HAZNET site located within 1/8 miles of the subject property.

6.8 RCRA

RCRA is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, treat, store, or dispose of hazardous waste. RCRA database allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

The review of RCRA-SQG small quantity generators (SOG) database has revealed that there is no RCRA-SQG sites within approximately 0.25 miles of the target property

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

The following conclusions are based on information collected during this assessment and are subject to the limitations stated in Section 8 of this report.

1. The project site is located at the east side of Alhambra Avenue a relatively short distance south of Newmark Avenue, in the City of Monterey Park, California. The total property size is 56,562 square feet (1.3 acres). The site is relatively flat and it is occupied by 14 residential units. These buildings were built in 1949 and 1950. There are concrete driveways between and along side of the buildings. The Property addresses are 338, 400, and 408 S. Alhambra Avenue, APN: 5259-004-036, and 5259-004-037, Monterey Park, California. No aboveground or underground storage tanks were observed during our initial site reconnaissance.

2. The existence of high concentration Radon is negligible at the site that is underlain by sedimentary deposits of alluvial soils.

3. Review of government record search indicates that the City Directory Abstract and City of Monterey Park records indicate that the existing buildings were constructed in 1949 and 1950.

4. Other listed sites are not likely to pose significant environmental concerns on the subject site by surface migration.

5. It is unlikely that the current tenants generates, stores or handles hazardous wastes. Additional assessment is not recommended at this time.

7.2 Recommendations

Additional assessment is not recommended at this time. Any future development, such as change use of the facility, or use of the groundwater, should be reviewed by an experienced environmental consultant.

8.0 LIMITATIONS

This Limited Phase I Environmental Site Assessment (ESA) report was prepared in accordance with generally accepted standards of technical practice for a determination of potential contaminant releases at or under the site.

It should be noted that this assessment is completed without any on-site or off-site explorations; therefore, no statement of scientific certainly can be made pertaining to the subsurface conditions, which may be the result of on-site or off-site sources. Findings, conclusions and recommendations of this report with respect to hazardous waste potential are limited as being based on the scope of work performed and professional judgment concerning the significance of the data gather during CLE's investigation. This assessment is not, and should not be construed as, a warranty or guarantee about the presence or absence of hazardous contaminants, which may affect the subject site.

9.0 REFERENCES

ASTM Standards on Environmental Site Assessments for Commercial Real Estate.

"Records, City of Monterey Park, Department of Building and Safety"

California Division of Mines and Geology, 1998, Seismic Hazard Zone Report for the El Monte 7.5-minutes Quadrangle, Los Angeles County, California Seismic Hazard Zone report 98-15.

EDR Radius Map, Report With GeoCheck, August 4, 2016
EDR City Directory Abstract, August 4, 2016
EDR Certified Sanborn Map Report, August 5, 2016

"Looking Toward East"
338, 400 and 408 Alhambra Avenue
Monterey Park, California

"Looking Toward East"
400 Alhambra Avenue
Monterey Park, California

APPENDIX A

GOVERNMENT RECORD SEARCH

CITY OF MONTEREY PARK — BUILDING DEPARTMENT — Phone: ATlantic 9-3883

BUILDING APPLICATION FOR PERMIT

Permit No.	Plan No.	P. C. No.	Group	Type	Use Zone
715			I	V	R-2

Date Issued	Ready For Inspection	Fire Zone	Set Back For Street Widening	Set Back For Use Zone
4-25-60		3		

Job Address: 400 "A thru K" So. Alhambra

Lot ______ Block ______ Tract ______

Size of Lot: 127 X 296

Owner
Name: Roger Chisholm
Address: 408 S. Alhambra Ave
City: Monterey Pk Phone: AT15293

Contractor
Name: Owner
Address:
City:
State & City License No. ______ Phone ______

Architect or Engineer
Name: —
Address: —
City:
State License No. ______ Phone ______

New	✓	No. of Families	
Alteration		No. of Rooms	
Addition		Size of Bldg.	
Repair		Stories	one
Move		Wall Covering	Stucco
Demolish		Roof Covering	Comp

I hereby certify that all work will be built to conform to Monterey Park Ordinances and California State laws applicable thereto: That I have carefully examined the above application and know the same to be true and correct.

Signature of Owner or Authorized Agent: R. L. Chisholm

VALUATION $ 34,400.00 PERMIT FEE $ 103.00 / 51.50

P.C. 154.50 ← Due

DESCRIPTION OF WORK

Use of Building: 5-duplex & 5 2-car garages.

Workmen's Insurance Policy No. ______
As required by State Law.

APPROVALS

Foundation & Mat'l.		
Masonry Walls		
Tilt-Up Walls		
Retaining Walls		
Swimming Pool		
Steel		
Bond Beams		
Rough Frame		
Fireplace		
Final		

2M 9-59 ARNOLDS

Phase I Environmental
338 S. Alhambra Avenue
Monterey Park, CA 91755

Inquiry Number: 4692816.3
August 05, 2016

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/05/16

Site Name:	Client Name:
Phase I Environmental	Cal Land Engineering
338 S. Alhambra Avenue	576 E. Lambert Rd
Monterey Park, CA 91755	Brea, CA 92821
EDR Inquiry # 4692816.3	Contact: Abe Kazemzadeh

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Cal Land Engineering were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 93A0-46E7-A479

PO # 16-023-095

Project 16-023-095

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 93A0-46E7-A479

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Cal Land Engineering (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Phase I Environmental
338 S. Alhambra Avenue
Monterey Park, CA 91755

Inquiry Number: 4692816.2s
August 04, 2016

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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PRELIMINARY LOW IMPACT DEVELOPMENT PLAN (PRELIMINARY LID PLAN)

65-Unit Condominium

338-410 s. Alhambra Ave., Monterey Park, CA 91755

Prepared for:

The Commons of MPK LLC

812 S. Atlantic Blvd., Ste A,

Monterey Park, CA 91054

Prepared by:

EGL Associates, Inc

11819 Goldring Rd, Unit A

Arcadia, CA 91006

(626) 263-3588

Date Prepared: 05/17/2023

Project Owner's Certification

I certify under penalty of law that this document and all attachments were prepared under my jurisdiction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathered the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner's Name:	The Commons of MPK LLC	
Owner's Title:	Owner	
Company:		
Address:	812 S. Atlantic Blvd., Ste A, Monterey Park, CA 91054	
Email:	alai002@gmail.com	
Telephone No:	626-628-4463	
Signature:	Date:	

Preparer (Engineer) Certification

Engineer's Name:	Hank Jong	
Engineer's Title:	Principle	
Company:	EGL Associates, Inc	
Address:	11819 Goldring Rd, Unit A, Arcadia, CA 91006	
Email:	mail@egl88.com	
Telephone No:	(626)263-3588	
I hereby certify that this Low Impact Development Plan is in compliance with, and meets the requirements set forth in, Order No. R4-2012-0175 of the Los Angeles Regional Water Quality Control Board.		
Engineer's Signature:	Date:	05/23/2023
Place Stamp Here:		

Table of Contents

Attachments

1. PROJECT DESCRIPTION

1.1. PROJECT CATEGORY

Check which box best represents the proposed project category. Only check "Yes" for one box.

Category	YES	NO
1. Development [a] of a new project equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious area [b]	☒	☐
2. Development [a] of a new industrial park with 10,000 square feet or more of surface area [c]	☐	☒
3. Development [a] of a new commercial mall with 10,000 square feet or more of surface area [c]	☐	☒
4. Development [a] of a new retail gasoline outlet with 5,000 square feet or more of surface area [c]	☐	☒
5. Development [a] of a new restaurant (SIC 5812) with 5,000 square feet or more of surface area [c]	☐	☒
6. Development [a] of a new parking lot with either 5,000 ft^2 or more of impervious area [b] or with 25 or more parking spaces	☐	☒
7. Development [a] of a new automotive service facility (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) with 5,000 square feet or more of surface area [c]	☐	☒
8. Projects located in or directly adjacent to, or discharging directly to a Significant Ecological Area (SEA),[d] where the development will: a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and b. Create 2,500 square feet or more of impervious area [b]	☐	☒
9. Redevelopment [e] of 5,000 square feet or more in one of the categories listed above **If yes, list redevelopment category here:**	☒	☐
10. Redevelopment [e] of 10,000 square feet or more to a Single Family Home, without a change in landuse.	☒	☐

a Development includes any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in land disturbance.

b Surfaces that do not allow stormwater runoff to percolate into the ground. Typical impervious surfaces include: concrete, asphalt, roofing materials, etc.

c The surface area is the total footprint of an area. Not to include the cumulative area above or below the ground surface.

d An area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and would be disturbed or degraded by human activities and developments. Also, an area designated by the City as approved by the Regional Water Quality Control Board.

e Land-disturbing activities that result in the creation, addition, or replacement of a certain amount of impervious surface area on an already developed site. Redevelopment does not include routine maintenance activities that are conducted to maintain the original line and grade, hydraulic capacity, or original purpose of facility, nor does it include modifications to existing single family structures, or emergency construction activities required to immediately protect public health and safety.

1.2. PROJECT DESCRIPTION

Total Project Area (ft^2): 75,440 sf

Total Project Area (Ac): 1.73 ac

EXISTING CONDITIONS

Condition	Area (ft^2)	Percentage (%)
Pervious Area:	44,576	59
Impervious Area:	30,864	41

PROPOSED CONDITIONS

Condition	Area (ft^2)	Percentage (%)
Pervious Area:	12,702	17
Impervious Area:	62,738	83

SITE CHARACTERISTICS

DRAINAGE PATTERNS/CONNECTIONS [Include a detailed description of existing and proposed drainage patterns. Describe the areas and sub-areas (to include square footage), treatment locations, direction of flow through each area, discharge point(s), ultimate termination point, etc.]	Existing: Existing drainage pattern drains from Southwest of site to Northeast of project site .
	Proposed: Existing drainage pattern will be maintained. Runoff from units will be captured by catch basin and using sump pump to pump to the proposed biofiltration planter box. Additional runoff from peak season will be discharged to Orange Ave from the biofiltration thru parkway drain.
NARRATIVE PROJECT DESCRIPTION [Include a detailed description of project areas, type of facilities, activities conducted onsite, materials and products received and stored on site, SIC Code (if applicable), land uses, land cover, design elements, drainage management areas (DMAs), etc.]	Proposed site will consist of 65-unit detached condominium.
OFFSITE RUNON [Describe any offsite runon	N/A

anticipated and how the runon will be either accounted for in LID BMP sizing or directed around the site.]	
UTILITY AND INFRASTRUCTURE INFORMATION [Include a description of the existing and proposed onsite utility and infrastructure. Evaluate the potential impacts of stormwater infiltration on subsurface utilities, establish necessary setbacks, and if the utilities need to be relocated. Retention-based stormwater quality control measures should not be located near utility lines where an increased volume of water could damage utilities.]	Existing and proposed utility line will not be affected by underground biofiltration planter box.
SIGNIFICANT ECOLOGICAL AREAS (SEAS) [Identify any known Significant Ecological Area (SEA) which the project is located in or directly adjacent to, or discharging directly to.]	N/A

1.3. HYDROMODIFICATION ANALYSIS

DOES THE PROPOSED PROJECT FALL INTO ONE OF THE FOLLOWING CATEGORIES? CHECK YES/NO.	YES	NO
1. *Project is a redevelopment that decreases the effective impervious area compared to the pre-project conditions.*	☐	☒
Describe:		
2. *Project is a redevelopment that increases the infiltration capacity of pervious areas compared to the pre-project conditions.*	☐	☒
Describe:		
3. *Project discharges directly or via a storm drain to a sump, lake, area under tidal influence, into a waterway that has a 100-year peak flow (Q_{100}) of 25,000 cfs or more.*	☐	☒
Describe:		
4. *Project discharges directly or via a storm drain into concrete or otherwise engineered (not natural) channels (e.g., channelized or armored with rip rap, shotcrete, etc.), which, in turn, discharge into receiving water that is not susceptible to hydromodification impacts.*	☒	☐
Describe: Both parcels will collect runoff thru catch basin and stored in biofiltration planter box. Additional overflow from planter box will be discharged to engineered channels on Puente street. Therefore, no hydromodification analysis is required.		

[Check "Yes" or "No," as applicable.

If one or more of the above criteria are checked "Yes," the project is exempt from Hydromodification Control Measures. State as such below.

If none of the above criteria are checked "Yes," the project will require Hydromodification control measures. Include detailed description of control measures to be implemented and a reference to calculations following the criteria outlined in MS4 Permit (Order R4-2012-0175) §VI.D.7.c.iv]

1.4. PROPERTY OWNERSHIP/MANAGEMENT

[Describe ownership of all portions of project and site. Include information on any infrastructure transfer to public agencies (City, County, Caltrans, etc.). Describe any property management company/association that will be formed. Include leasee information, as applicable.]	Property Owner: The Commons of MPK LLC

2. BEST MANAGEMENT PRACTICES (BMPS)

2.1. SITE DESIGN

85TH PERCENTILE, 24-HOUR STORM DEPTH [Determined from the Los Angeles County 85th percentile precipitation isohyetal map. If less than 0.75 inch, state as such and use 0.75 inch throughout.]	0.90
SITE DESIGN [Describe site design and drainage plan including: site design practices utilized and how BMPs are incorporated using the appropriate hierarchy.]	Biofiltration Planter box

BMP LIST

[Fill out the table below with information on the BMPs incorporated in each Drainage Management Area (DMA)]

DMA DESIGNATION	SQUARE FOOTAGE (SF)	ACR EAGE (AC)	STORM WATER QUALITY DESIGN VOLUME (SWQDV, CF)	BMP TYPE [Include make & model if proprietary]	MINIMUM BMP SIZE [Include units]	BMP SIZE PROVIDED [Include units]	GPS COORDINATES
Parcel 1	75,440	1.73	4282.41	biofiltration	4282.41 SF	500	34.0583853856326, -118.11648371238091

2.2. BMP SELECTION

2.2.1. INFILTRATION BMPS

NAME	INCLUDED [Check all that apply.]
Bioretention without underdrains	☐
Infiltration Trench	☐
Infiltration Basin	☐
Drywell	☐
Proprietary Subsurface Infiltration Gallery	☐
Permeable Pavement (concrete, asphalt, pavers)	☐
Other:	☐
Other:	☐

DESCRIPTION	N/A
CALCULATIONS	N/A

2.2.2. RAINWATER HARVEST AND USE BMPS

NAME	INCLUDED [Check all that apply.]
Above-ground cisterns and basins	☐
Underground detention	☐
Other:	☐
Other:	☐
Other:	☐

DESCRIPTION	N/A
CALCULATIONS	N/A

2.2.3. ALTERNATIVE COMPLIANCE BMPS

BIOFILTRATION BMPS

(Allowed only if Infiltration BMPs and Rainwater Harvest and Use BMPs are Infeasible.)

NAME	INCLUDED [Check all that apply.]
Bioretention with underdrains (i.e. planter box, rain garden, etc.)	☒
Constructed Wetland	☐
Vegetated Swale	☐
Vegetated Filter Strip	☐
Tree-Well Filter	☐
Other:	☐
Other:	☐

CALCULATIONS	
	SWQDv1 = 4,282.41 cf V_b =1.5(SWQDv – Vr) = 1.5(4,282.41) = 6,423.62 cf (where, V_b: Biofiltration Volume, SWQDv: Storm Water Quality Design Volume, Vr: Volume of stormwater runoff reliably retained on-site) Required detention time, tp = d / (fdesign/12) (where, d: ponding depth,=1.5' max., fdesign:Design Infiltration Rate, = 2.5 in/hr) tp = 1.5/(2.5/12) = 7.2 < 96 hours Required Area of Planter Box, Ap = V_b / d (where, V= 970.92 cf, d=1.5') = 6423.62 / 1.5 = 4282.41 sf Proposed planter box size = **4300 SF**

OFFSITE BMPS

(If Infiltration BMPs, Rainwater Harvest and Use BMPs, and Biofiltration BMPs are Infeasible)

NAME	INCLUDED [Check all that apply.]
Offsite Infiltration	☐
Ground Water Replenishment Projects	☐
Offsite Project - Retrofit Existing Development	☐
Regional Storm Water Mitigation Program	☐
Other:	☐
Other:	☐

DESCRIPTION	
CALCULATIONS	

2.2.4. TREATMENT CONTROL BMPS

Treatment control BMPs can only be used as pre-treatment to LID BMPs.

NAME	INCLUDED [Check all that apply.]
Media Filter	☐
Filter Insert	☐
CDS Unit	☐
Other:	☐
Other:	☐

DESCRIPTION [Include descriptions on selection, suitability, sizing, and infeasibility, as applicable.]	

2.2.5. HYDROMODIFICATION CONTROL BMPS

NAME	INCLUDED [Check all that apply.]
Infiltration System	☐
Above-ground Cistern	☐
Above-ground Basin	☐
Underground Detention	☐
Other:	☐
Other:	☐

DESCRIPTION	
CALCULATIONS	

2.2.6. NON-STRUCTURAL SOURCE CONTROL BMPS

NAME	CHECK ONE	
	Included	**Not Applicable**
Education for Property Owners, Tenants and Occupants	☒	☐
Activity Restrictions	☒	☐
Common Area Landscape Management	☒	☐
Common Area Litter Control	☒	☐
Housekeeping of Loading Docks	☐	☒
Common Area Catch Basin Inspection	☒	☒
Street Sweeping of Private Streets and Parking Lots	☐	☒

2.2.7. STRUCTURAL SOURCE CONTROL BMPS

NAME	CHECK ONE	
	Included	**Not Applicable**
Provide storm drain system stenciling and signage	☒	☒
Design and construct outdoor material storage areas to reduce pollution introduction	☐	☒
Design and construct trash and waste storage areas to reduce pollution introduction	☐	☒
Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	☒	☐
Protect slopes and channels and provide energy dissipation	☐	☒
Loading docks	☐	☒
Maintenance bays	☐	☒
Vehicle wash areas	☐	☒
Outdoor processing areas	☐	☒
Equipment wash areas/racks	☐	☒
Fueling areas	☐	☒
Hillside landscaping	☐	☒

Attachment A

Calculations

[Include calculations for each BMP following an approved published design standard (i.e. City Manuals, County Manuals, Caltrans, CASQA, etc.). Calculations must be followed step-by-step with no alterations. Also, include an excerpt from the design standard used.]

SWQDv1 = 4,282.41 cf
Vb =1.5(SWQDv – Vr) = 1.5(4,282.41 -0) = 6,423.62 cf
(where, V¬b: Biofiltration Volume, SWQDv: Storm Water Quality Design Volume,
Vr: Volume of stormwater runoff reliably retained on-site)
Required detention time, tp = d / (fdesign/12)
(where, d: ponding depth,=1.5' max.,
fdesign:Design Infiltration Rate, = 2.5 in/hr)
tp = 1.5/(2.5/12) = 7.2 < 96 hours
Required Area of Planter Box, Ap = Vb / d (where, V= 970.92 cf, d=1.5')
= 6423.62 / 1.5 = 4282.41 sf
Proposed planter box size = 4,300 SF

Peak Flow Hydrologic Analysis

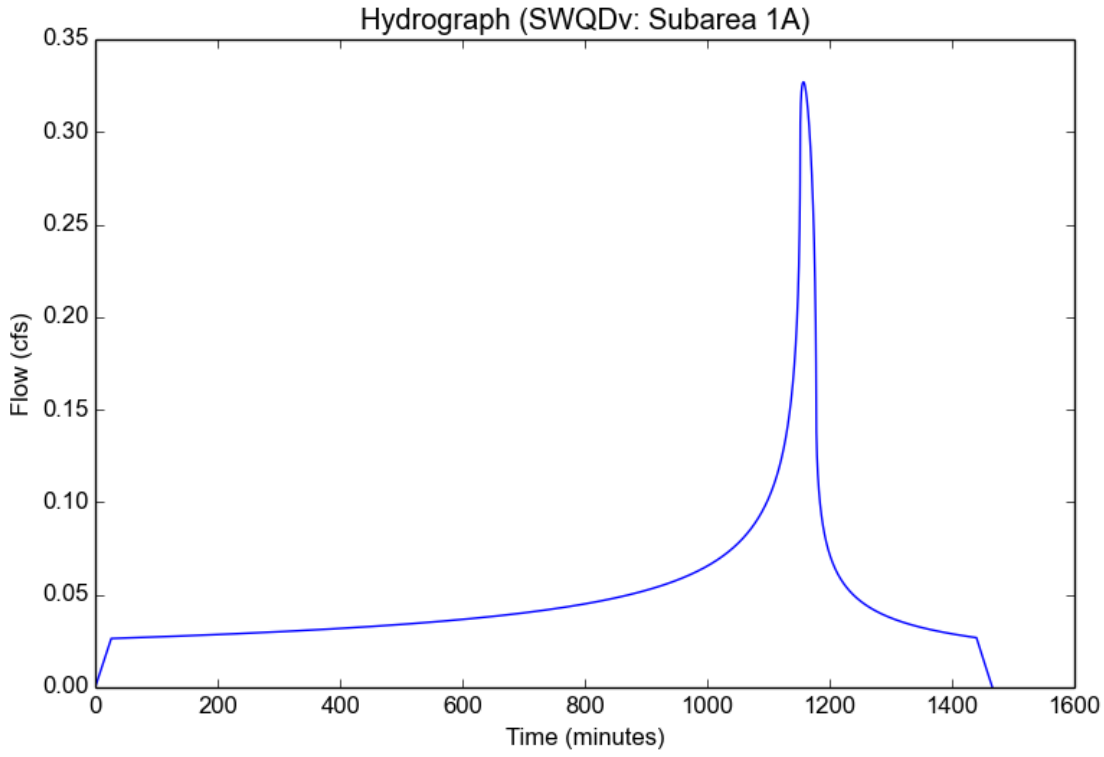
File location: Z:/HANK/ACAD/MISC/2023/23227002/SWQDv - Subarea 1A-1.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	SWQDv
Subarea ID	Subarea 1A
Area (ac)	1.73
Flow Path Length (ft)	536.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.9
Percent Impervious	0.83
Soil Type	13
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.9
Peak Intensity (in/hr)	0.2474
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.764
Time of Concentration (min)	26.0
Clear Peak Flow Rate (cfs)	0.327
Burned Peak Flow Rate (cfs)	0.327
24-Hr Clear Runoff Volume (ac-ft)	0.0983
24-Hr Clear Runoff Volume (cu-ft)	4282.4096



Attachment B

Geotechnical Investigation

[Include all geotechnical documents relevant to infiltration feasibility (i.e. Geotechnical Report, Soils Report, Percolation Report, Soils Letter, etc.). The document(s) must detail the results of the soil investigation, the infiltration rate, groundwater depths, soil characterization, etc. Note that soil borings must be conducted in the area of the proposed BMPs. In addition to the complete soils report, a letter signed and stamped with wet ink application by a geotechnical engineer must be provided. The letter must state that the soil will or will not exhibit instability as a result of implementing the proposed BMPs, that the seasonal high groundwater depth is or is not at the required depth (5-10 feet depending on BMP type) below the base of the infiltration BMP, and the infiltration rate is or is not at least 0.3 in/hr.]

Attachment C

Master Covenant Agreement (MCA)

[Include a Master Covenant Agreement (MCA). Obtain a template from the City of Covina. The MCA must list the type and dimensions of each BMP. The MCA must contain the following exhibits: Legal Description, Site Plan, Operations and Maintenance (O&M) Plan, and Owner's Certification. Once the MCA is approved by the City, it will need to be notarized and recorded (along with attachments) with the County Recorder's Office.]

Attachment D

Operations and Maintenance (O&M) Plan

[Include an Operations and Maintenance (O&M) Plan. This should include the components of the BMPs, the frequency of inspections and maintenance, the responsible entity, etc.]

Operations and Maintenance Plan

65-Unit Condominium - 338-410 S. Alhambra Ave

338-410 S. Alhambra Ave., Monterey Park, CA 91755

REQUIRED PERMITS

List any permits required for the implementation, operation, and maintenance of the BMPs. Possible examples are: permits for connection to sanitary sewer, permits from California Department of Fish and Game, encroachment permits, etc. If no permits are required, a statement to that effect should be made.

_____

_____

_____

RESPONSIBLE PARTY

The owner is aware of the maintenance responsibilities of the proposed BMPs. A funding mechanism is in place to maintain the BMPs at the frequency stated in the LID Plan. All records must be made available for review upon request. The contact information for the entity responsible is provided below:

Name:	The Commons of MPK LLC
Company:	
Title:	Owner
Address 1:	812 S. Atlantic Blvd., Ste A, Monterey Park, CA 91054
Address 2:	
Phone Number:	626-628-4463
Email:	alai002@gmail.com

BMP Name	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Non-Structural Source Control BMPs			
Education for Property Owners, Tenants and Occupants	The property owner will be provided educational material.	When applicable	Owner
Activity Restriction	The owner will prescribe activity Restrictions to protect surface water quality, through lease terms or other equally effective measure, for the property.	On going	Owner
Common Area Landscape Management	N/A		
Common Area Litter Control	N/A		
Housekeeping of Loading Docks	N/A		
Common Area Catch Basin Inspection	N/A		
Street Sweeping Private Streets and Parking Lots	N/A		
Structural Source Control BMPs			
Provide Storm Drain Stenciling and Signage	N/A		
Design and Construct Outdoor Material Storage Areas to Reduce Pollutant Introduction	N/A		
Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction	N/A		

BMP Name	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Use Efficient Irrigation Systems & Landscape Design	In conjunction with routine maintenance activities, verify that landscape design continues to function properly by adjusting properly to eliminate overspray to hardscape areas, and to verify that irrigation timing and cycle lengths are adjusted in accordance with water demands, given time of year, weather, day or night-time temperatures based on system specifications and local climate patterns.	Monthly	Owner
Protect Slopes and Channels and Provide Energy Dissipation	N/A		
Loading Docks	N/A		
Maintenance Bays	N/A		
Vehicle Wash Areas/Racks	N/A		
Outdoor Processing Areas	N/A		
Equipment Wash Areas	N/A		
Fueling Areas	N/A		
Hillside Landscaping	N/A		
LID BMPs			
BIO-1 Biofiltration Planter Box		Annually	Owner

Attachment E

Construction Plans

[Include full sized copies (24” x 36” or larger) of all relevant plans (i.e. grading plans, plumbing plans, drainage plans, etc.) signed, stamped, and dated with wet ink application by a California licensed civil engineer with all water quality notes and details. This is to properly evaluate the site design and ensure all BMPs are located on plans which will be used by the contractor during construction. The plans must indicate the locations of all BMPs, cross-sectional details of all BMPs, conveyance systems, drainage connections, overflow processes, elevations, inverts, etc. All conveyance systems (i.e. ribbon gutters, area drains, storm drains, swales, etc.) must be indicated with inverts and elevations. The cross-sectional details of the BMPs must show the type and depth of all layers (i.e. amended soil layer, gravel layer, etc.) and must follow the criteria from the design standard used.]

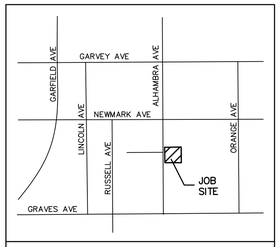
CONCEPTUAL GRADING & DRAINAGE PLAN

TRACT MAP NO. 84188

SCALE : 1"=10'-0"

SCALE : 1"=20'-0"

NORTH



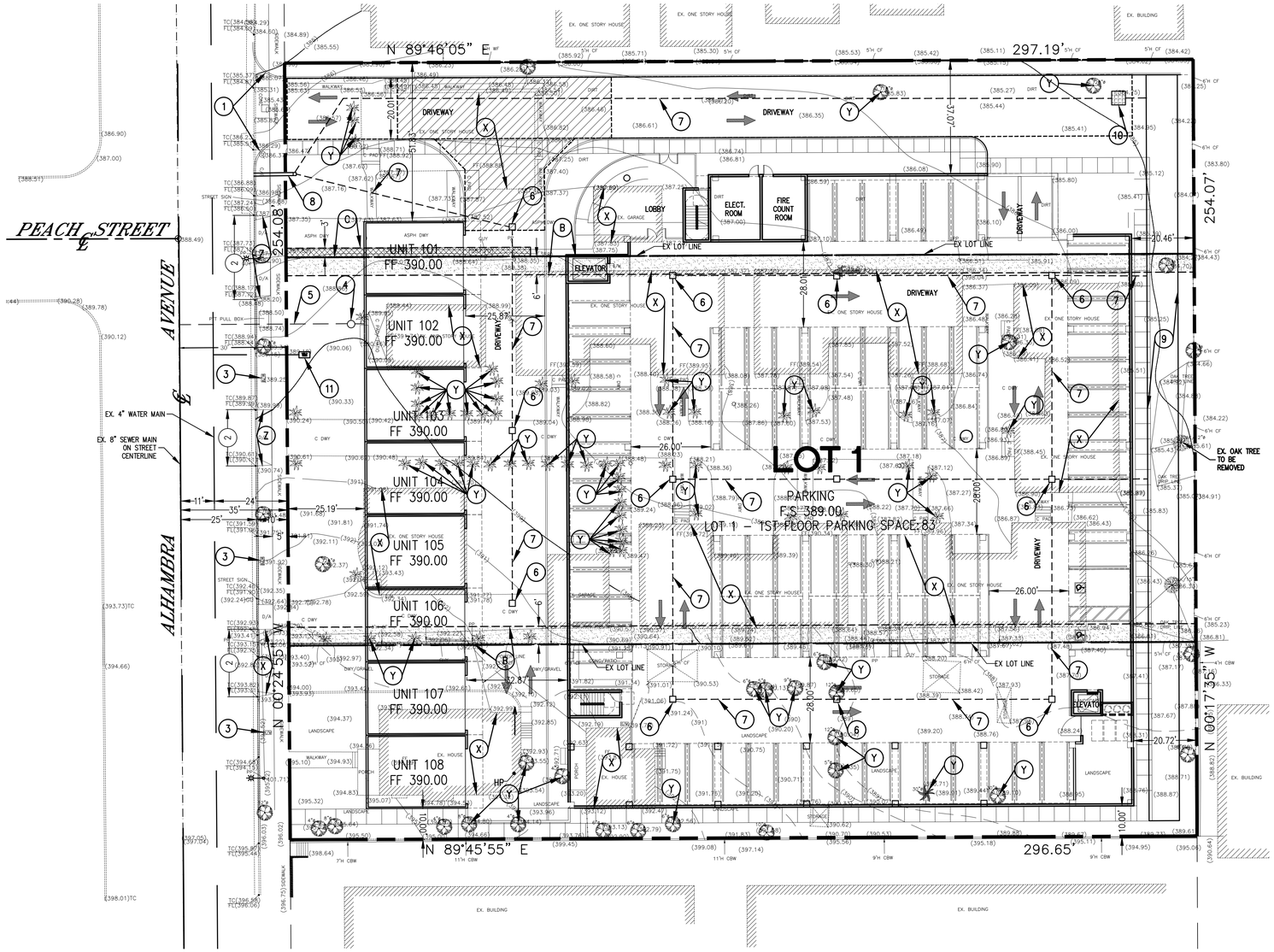
VICINITY MAP N.T.S.

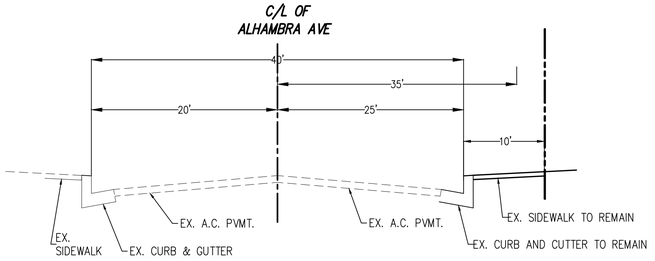
EASEMENT NOTES

Ⓐ EX. EASEMENT AND RIGHTS INCIDENTAL THERETO FOR PIPE AND CONDUITS AS SET FORTH IN A DOCUMENT RECORDED IN BOOK 6055, PAGE(S) 222 OF DEEDS. (BLANKET IN NATURE).

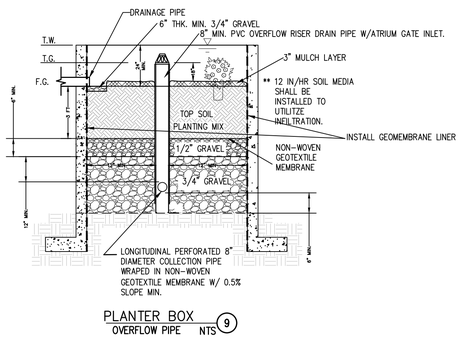
Ⓑ EX. EASEMENT FOR POWER LINES, INGRESS AND EGRESS PURPOSES, RECORDED AS INSTRUMENT NO. 3061, JULY 26, 1960 OF O.R. (TO BE QUITCLAIMED)

Ⓒ EX. EASEMENT TO THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY, AS SET FORTH IN A DOCUMENT RECORDED MAY 11, 1970 AS INSTRUMENT NO. 2926, OF O.R. (TO BE QUITCLAIMED)





SECTION A-A (TYPICAL SECTION)



PLANTER BOX OVERFLOW PIPE NTS (9)

*BIO-1 PER LA COUNTY LID MANUAL 2014

OWNER:

THE COMMONS OF MPK LLC
812 S. ATLANTIC BLVD, SUITE A
MONTEREY PARK, CA 91754
PH: 626-628-4463

PREPARED BY:

HANK JONG, PE
EGL ASSOCIATES, INC.
11819 GOLDRING ROAD, UNIT A
ARCADIA, CA 91006
PH: 626-263-3588
E-MAIL: MAIL@EGL88.COM

GENERAL NOTES:

ZONE: R-3 (PRESENT)
ZONE: R-3 (PROPOSED)
NO. OF EX. LOT: 3
NO. OF PROP. LOT: 1
NO. OF EX. UNITS: 10
NO. OF PROP. UNIT: 65
NO. OF PROP. PARKING: 99
AREA OF LOT: 75,440 SQ. FT. (1.73 ACRES)
SEWERAGE DISPOSAL: BY GRAVITY SEWER PIPES TO SEWER MAIN.
APN: 5259-004-036, 037 & 038

DEMOLITION NOTES

Ⓧ REMOVE EXISTING STRUCTURE.
Ⓨ REMOVE EXISTING TREE.
Ⓩ EX. DRIVEWAY APPROACH TO BE REMOVED

CONSTRUCTION NOTES

(1) PROP. DRIVEWAY APPROACH.
(2) PROP. NEW CURB AND GUTTER.
(3) EX. WATER METER TO BE RELOCATED.
(4) PROP. SEWER CLEAN OUT.
(5) PROP. SEWER LATERAL.
(6) PROP. CATCH BASIN.
(7) PROP. DRAINAGE PIPE.
(8) PROP. PARKWAY DRAIN.
(9) PROP. BIOFILTRATION PLANTER BOX.
(10) PROP. SUMP PUMP.
(11) PROP. MASTER WATER METER.

LEGEND

EX .....EXISTING
TG .....TOP GRATE
F.G.....FINISH GRADE
FS .....FINISH SURFACE
TC.....TOP OF CURB
F.F.....FINISH FLOOR
H.P.....HIGH POINT
TW.....TOP OF WALL
(186.70) .....EXISTING ELEVATION
--(185)-- EXISTING CONTOUR

.....DRAINAGE PATTERN
...PROPOSED BLOCK WALL
...EXISTING STRUCTURE
...PROPOSED DRAIN PIPE
...PROPOSED CATCH BASIN
...FENCE LINE
.....SEWER MANHOLE

PROJECT LOCATION:
65-UNIT CONDO
338-410 S. ALHAMBRA AVE., MONTEREY PARK, CA 91755

REVISIONS	BY

RELEASED DATE

PREPARED FOR:
THE COMMONS OF MPK LLC
812 S. ATLANTIC BLVD, SUITE A
MONTEREY PARK, CA 91754

EGL Associates, Inc.
11819 GOLDRING ROAD, Unit A
ARCADIA, CA 91006
Tel: (626)263-3588
E-MAIL: MAIL@EGL88.COM

REGISTERED PROFESSIONAL ENGINEER HANK WING-LI JONG 45846 CIVIL STATE OF CALIFORNIA

DRAWN	SH
CHECKED	HJ
DATE	05/03/2023
JOB NO.	23-227-002
SCALE	1"=20'
FILE	

DRAWING 1 of 1

CG-1

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February 10, 2023

Mr. Bob Prasse, Director of Environmental Services
MIG, INC.
1650 Spruce Street, Suite 106
Riverside, California 92507

RE: 338 – 410 Alhambra Avenue Residential Project Transportation Study Screening Assessment
Project No.: 19608

Dear Mr. Prasse:

Ganddini Group, Inc. is pleased to provide this Transportation Study Screening Assessment for the proposed 338 – 410 Alhambra Avenue Residential Project. We trust the findings of this analysis will aid you and the City of Monterey Park in assessing the project.

PROJECT DESCRIPTION

The 1.73-acre project site is located east of Alhambra Avenue between Newmark Avenue and Graves Avenue addressed at 338 – 410 Alhambra Avenue (APNs: 5259-004-036, -037, and -038) in the City of Monterey Park, California. The project site is currently occupied by two single-family detached residential dwelling units and thirteen multi-family housing (low-rise) dwelling units. Figure 1 shows the project location map.

The proposed project involves construction of a three-story residential building with 65 multi-family housing (low-rise) dwelling units. Vehicular access is proposed at Alhambra Avenue via two project driveways. The proposed project is anticipated to be constructed and fully operational by year 2025. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 and Table 2 show the existing land uses and project trip generation for potential residential use based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Based on review of the ITE land use descriptions, trip generation rates for Single-Family Detached Residential (ITE Land Use Code 210) and Multi-Family Housing (Low-Rise) (ITE Land Use Code 220) were determined to adequately represent the existing land uses and proposed project and were used for calculating the project trip generation forecasts. The existing land uses and project trip generation forecasts were determined by multiplying the trip generation rates by the land use quantities.

As shown in Table 1, the existing land uses currently generate approximately 107 daily vehicle trips, including 6 vehicle trips during the AM peak hour and 8 vehicle trips during the PM peak hour.

As shown in Table 2, the proposed project is forecast to generate approximately 438 daily vehicle trips, including 26 vehicle trips during the AM peak hour and 33 vehicle trips during the PM peak hour.

As shown in Table 3, the proposed project is forecast to generate approximately 331 additional daily vehicle trips compared to existing project site uses, including 20 additional vehicle trips during the AM peak hour and 25 additional vehicle trips during the PM peak hour.

CRITERIA FOR THE PREPARATION OF TRAFFIC IMPACT ANALYSES

According to the City of Monterey Park *Transportation Impact Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (September 2020) "[the City TIA Guidelines"], certain types of projects, because of their size, nature, or location, are exempt from the requirement of preparing a traffic impact analysis.

Level of Service (LOS) Analysis

The City of Monterey Park has established guidelines for Level of Service (LOS) impact for General Plan operational compliance. As specified in the City TIA Guidelines, a traffic impact analysis shall be required based on the following five factors:

1. A traffic study is required for new developments or for the expansion of existing developments which are forecast to generate a minimum of 50 vehicles per hour (total two-way) during the greater of the AM or PM peak hours.

2. A traffic study will be required for all developments, regardless of size, located within 300 feet of the intersection of two arterial streets, as defined in the General Plan or for any developments fronting on two different streets, regardless of classification.

3. The presence of an existing or future traffic safety problem will require a traffic study.

4. The location of the developments in an environmentally or otherwise sensitive area, or in an area that generates controversy will require a traffic study.

5. The presence of a nearby substandard intersection or street will require a traffic study. The substandard condition is normally considered to be level of service "D" or worse.

The proposed project is projected to generate less than 50 new AM or PM peak hour trips. The project site is not located within 300 feet of the intersection of two arterial streets and does not front two different streets. Therefore, criteria number 1 and 2 are not met.

Criteria 3 and 4 are qualitative in nature and not anticipated to be met by the proposed project. Criterion 5 is unknown without an existing analysis of the nearby roadway network but is not anticipated to be met by the addition of project traffic. Based on the minimal net trip increase, the project would not appreciably worsen any of the considerations in criteria 3 through 5.

Therefore, the project reasonably meets the criteria for exemption from a traffic impact analysis based on City of Monterey Park TIA Guidelines.

Vehicle Miles Traveled (VMT) Analysis

The project VMT impact has also been assessed in accordance with the City TIA Guidelines. The City TIA Guidelines establish screening thresholds for certain types of projects that may be presumed to cause a less

than significant VMT impact based on substantial evidence provided in the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018).

The City TIA Guidelines specify the following three screening steps: 1) Transit Priority Area (TPA) Screening; 2) Low VMT Area Screening; and 3) Project Type Screening; and.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the City;
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency with input from the Southern California Association of Governments [SCAG]): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Gabriel Valley Council of Governments (SGVCOG) VMT Screening Tool was used to determine if the project is located within a TPA. The project site is not located within a TPA based on the SGVCOG VMT Screening Tool assessment. Therefore, the proposed project does not satisfy the City-established screening criteria for projects located within a TPA.

Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

For this screening in the SGVCOG VMT Screening Tool, the Southern California Association of Governments Regional Travel Demand Model was used to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs). TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

The proposed project is consistent with existing residential land uses in the TAZ and there does not appear to be anything unique about the project that would otherwise be misrepresented utilizing the data from the SGVCOG VMT Screening Tool. In accordance with the City TIA Guidelines, a low VMT area for residential projects is defined as a TAZ where VMT per service population does not exceed 15 percent below the current SGVCOG jurisdictional baseline VMT per service population. Exhibit A shows the SGVCOG VMT Screening Tool results for the project site.

SGVCOG VMT Evaluation Tool Report

SGVCOG Page 1

Project Details

Timestamp of Analysis: February 06, 2023, 02:27:28 PM

Project Name: 338 - 410 Alhambra Boulevard Residential

Project Description: 65 DU Multi-Family Housing (Low-Rise)

Project Location

jurisdiction: Monterey Park

apn	TAZ
5259-004-036	22148100
5259-004-037	22148100
5259-004-038	22148100

Inside a TPA? No (Fail)

Project Land Use

Residential:

Single Family DU:

Multifamily DU:

Total DUs: 0

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

Motor Vehicle Parking:

Bicycle Parking:

Analysis Details

Data Version: SCAG Regional Travel Demand Model 2016 RTP Base Year 2012

Analysis Methodology: TAZ

Baseline Year: 2023

SGVCOG VMT Evaluation Tool Report

SGVCOG Page 2

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project 1:	Total VMT per Service Population
VMT Baseline Description 1:	SGVCOG Average
VMT Baseline Value 1:	34.78
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	21.6	null	null
Low VMT Screening Analysis	Yes (Pass)	null	null

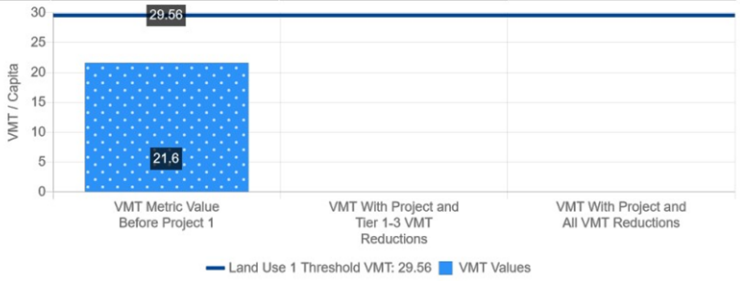

Exhibit A – SGVCOG VMT Screening Tool Results for the Project

Based on the SGVCOG VMT Screening Tool assessment, the proposed project is located within TAZ 22148100. The project TAZ 2023 Total VMT per service population is equal to 21.6. The jurisdictional 2023 Total VMT per service population is equal to 34.78. Therefore, the project VMT does not exceed 15% below the SGVCOG jurisdictional baseline VMT per service population. The proposed project satisfies the City-established screening criteria for projects located in low VMT areas and may be presumed to result in a less than significant VMT impact.

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact. The following uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local-serving K-12 schools
- Local parks
- Day care centers
- Local-serving retail uses less than 50,000 square feet, including:
    - Gas stations
    - Banks
    - Restaurants
    - Shopping center
- Local-serving hotels (e.g. non-destination hotels)
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (Public libraries, fire stations, local government)
- Affordable, supportive, or transitional housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Student housing projects on or adjacent to college campuses
- Other local-serving uses as approved by the City Traffic Engineer
- Projects generating less than 110 daily vehicle trips
    - This generally corresponds to the following "typical" development potentials:
        - 11 single family housing units
        - 16 multi-family, condominiums, or townhouse housing units
        - 10,000 square feet of office
        - 15,000 square feet of light industrial
        - 63,000 square feet of warehousing
        - 79,000 square feet of high cube transload and short-term storage warehouse

The project site is not local-serving retail and is also not a land use that meets the thresholds listed as being presumed to have a less than significant impact. Therefore, the proposed project does not satisfy the City-established screening criteria for project type screening.

Mr. Bob Prasse, Director of Environmental Services
MIG, INC.
February 10, 2023

CONCLUSION

The proposed project is forecast to generate approximately 331 additional daily vehicle trips compared to existing project site uses, including 20 additional vehicle trips during the AM peak hour and 25 additional vehicle trips during the PM peak hour.

The project reasonably meets the criteria for exemption from a traffic impact analysis based on City of Monterey Park TIA Guidelines.

The proposed project satisfies the City-established screening criteria for projects located in low VMT areas and may be presumed to result in a less than significant VMT impact.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
Bryan Crawford | Senior Associate
Giancarlo Ganddini, PE, PTP | Principal

Table 1
Existing Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Unit[2]	% In	% Out	Rate	% In	% Out	Rate	Daily
Single-Family Detached Residential	ITE 210	DU	26%	74%	0.70	63%	37%	0.94	9.43
Multi-Family Housing (Low-Rise)	ITE 220	DU	24%	76%	0.40	63%	37%	0.51	6.74

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Unit[2]	In	Out	Total	In	Out	Total	Daily
Single-Family Detached Residential	2	DU	0	1	1	1	1	2	19
Multi-Family Housing (Low-Rise)	13	DU	1	4	5	4	2	6	88
Total			**1**	**5**	**6**	**5**	**3**	**8**	**107**

Notes:

(1) ITE = Institute of Transportation Engineers, Trip Generation Manual, 11th Edition, 2021; ### = Land Use Code

(2) DU = Dwelling Units

Table 2
Project Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Unit[2]	% In	% Out	Rate	% In	% Out	Rate	Daily
Multi-Family Housing (Low-Rise)	ITE 220	DU	24%	76%	0.40	63%	37%	0.51	6.74

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Unit[2]	In	Out	Total	In	Out	Total	Daily
Multi-Family Housing (Low-Rise)	65	DU	**6**	**20**	**26**	**21**	**12**	**33**	**438**

Table 3
Project Trip Generation Comparison

Trips Generated							
	AM Peak Hour			PM Peak Hour			
Land Use	In	Out	Total	In	Out	Total	Daily
Existing Land Use[1]	1	5	6	5	3	8	107
Proposed Project[2]	6	20	26	21	12	33	438
Net New Trips	**+5**	**+15**	**+20**	**+16**	**+9**	**+25**	**+331**

Notes:
(1) See Table 1

(2) See Table 2

Figure 1
Project Location Map

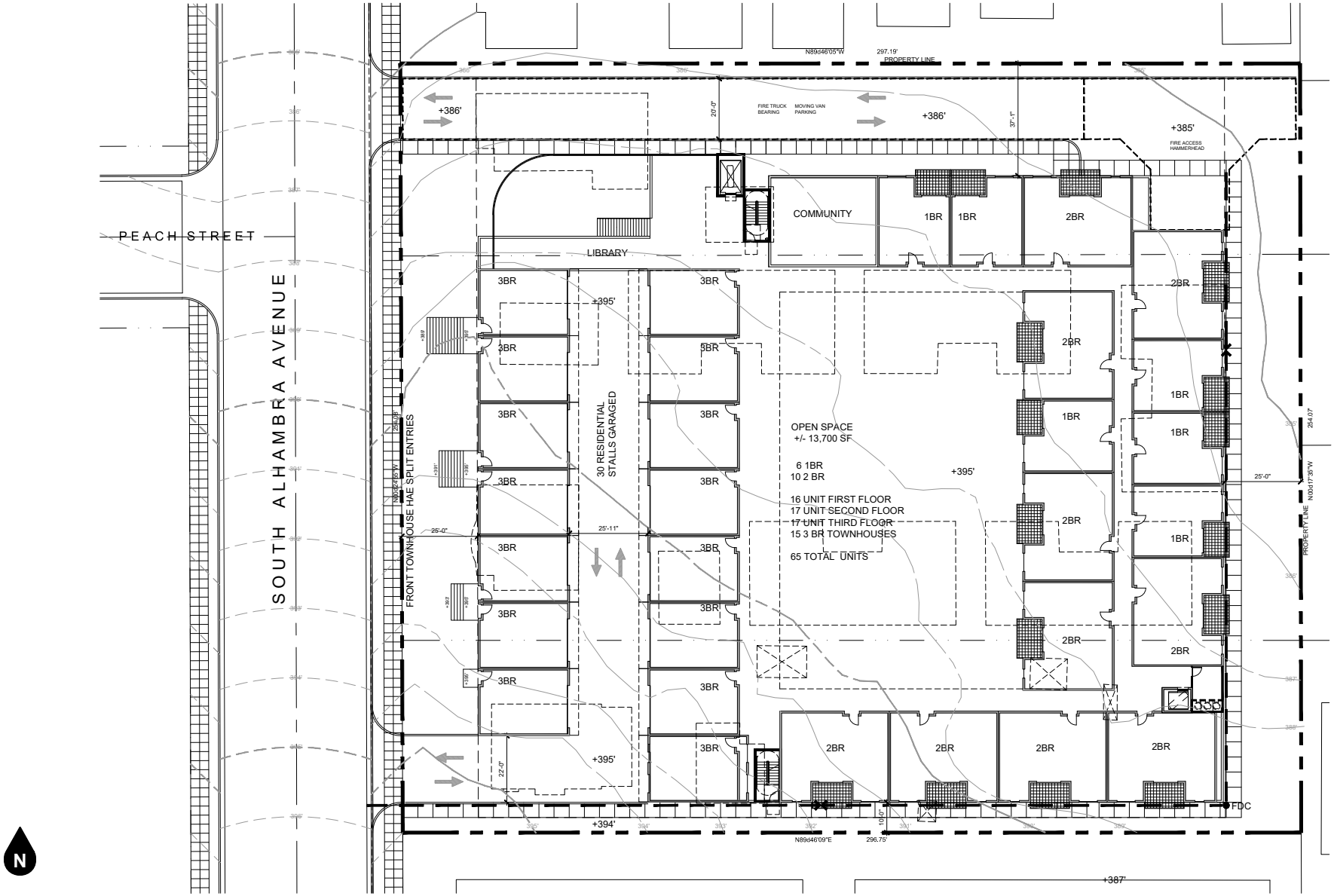

Figure 2
Site Plan

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