HOLY INNOCENTS
PARISH CHURCH AND SCHOOL

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

(MND08-22)

Lead Agency:

CITY OF LONG BEACH
411 West Ocean Boulevard, 3rd Floor
Long Beach, CA 90802

Prepared by:

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November 2022

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1.0 INTRODUCTION

This section provides an overview of the proposed Holy Innocents Parish Church and School project (proposed project), describes the environmental compliance requirements, and identifies the discretionary actions and approvals needed to implement the proposed project.

1.1 PROJECT OVERVIEW

Holy Innocents Parish has a near century-long history in the City of Long Beach and is the second largest parish in the City. The existing church is located off 20th Street and Pasadena Avenue at 425 East 20th Street and includes an on-site rectory. In 1956, due to limited land area near the existing church, the parish purchased six lots at 2500 Pacific Avenue. The 2500 Pacific Avenue site is the project site and location of the existing Holy Innocents Parish School. The school has operated at this location since 1958 and serves transitional kindergarten to 8th grade students. The proposed project involves the expansion of the existing school to include instruction for 9th through 12th grades and the addition of church-related facilities. The three phased expansion would include the construction of a two-story school building, a single-story gymnasium, a parish office, a rectory, a convent, and a church.

1.2 ENVIRONMENTAL COMPLIANCE REQUIREMENTS

Section 15063(a) of the California Environmental Quality Act (CEQA) Guidelines requires the lead agency to prepare an Initial Study to determine if a project may have a significant effect on the environment. The purpose of this document is to inform the City of Long Beach, public agencies and interested parties of the potential environmental effects resulting from the proposed project. For the proposed project to obtain environmental clearance in the form of a Mitigated Negative Declaration (MND), any potential significant adverse effects must be mitigated to a less-than-significant level. This document alone does not determine whether the proposed project will be approved. Rather, it is a disclosure document aimed at informing all concerned parties and fostering informed discussion and decision-making regarding all aspects of the proposed project.

1.3 PROJECT INFORMATION

Project Title / Location:	Holy Innocents Parish Church and School 2500 Pacific Avenue Long Beach, CA 90806
Lead Agency Name / Address:	City of Long Beach, Planning Bureau 411 West Ocean Boulevard, 3rd Floor Long Beach, CA 90806
Contact Person / Phone Number:	Cynthia de la Torre, Planner IV / (562) 570-6559 Amy Harbin, Planner V / (562) 570-6872 Baltazar Barrios, Contract Planner / (562) 570-5087
Project Applicant's Name:	Lindsay Ortega, Sagecrest Planning c/o The Friends of Holy Innocents' Catholic Church

1.4 DISCRETIONARY ACTIONS AND APPROVALS

Discretionary actions include those local approvals or entitlements necessary to implement a project. The proposed project would require the following discretionary actions:

- Vesting Tentative Parcel Map – Required to merge the existing lots to accommodate the proposed development. The proposed project includes a request for an 18-foot x 110-foot portion of the alley located off Willow Avenue along the east property line to be vacated as part of the Tentative Parcel Map.
- Long Range Development Plan – Required for lots exceeding 40,000 square feet.
- Site Plan Review – Required for nonresidential development in SP-1 with 1,000 square feet or more of new building area,[1] for projects in the Institutional Zone,[2] and required in conjunction to a Long Range Development Plan.[3] Such plan shall be submitted to the Planning Commission for approval through the site plan review procedure.
- Sign Program[4] – Required for any new commercial, industrial, or institutional building(s).

1.5 ORGANIZATION OF THIS INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

The content and format of this Initial Study/Mitigated Negative Declaration (IS/MND) is designed to meet the requirements of CEQA and is organized into the following four sections:

1.0 Introduction. This section provides an overview of the proposed project, describes the environmental compliance requirements, and identifies the discretionary actions and approvals needed for the proposed project.

2.0 Project Description. This section identifies the location of the project site, provides a detailed description of the proposed project, and provides an estimated timeline for the construction and implementation of the proposed project.

3.0 Initial Study Checklist and Evaluation. This section contains the CEQA Guidelines Appendix G: Initial Study Checklist and identifies the level of impact under each environmental impact category. This section includes a discussion of the environmental impacts and any mitigation measures associated with each category. Since the project site is located within the Midtown Specific Plan area, this section also presents the conclusions of the Midtown Specific Plan EIR and discusses the applicability mitigation measures identified in this EIR to the proposed project.

4.0 List of Preparers and Sources Consulted. This section provides a list of the consultant team members that participated, and a list of sources and references used in the preparation of this IS/MND.

[1] Midtown Specific Plan, page 130.
[2] LBMC Section 21.34.025
[3] LBMC Section 21.34.020
[4] LBMC Section 21.44.035.C.2.b

2.0 PROJECT DESCRIPTION

This section describes the project site and the surrounding area, provides a detailed description of the proposed project, and identifies an estimated timeline for the construction of the proposed project.

2.1 PROJECT LOCATION

The project site is located at 2500 Pacific Avenue in the City of Long Beach and is comprised of five parcels (Assessor's Parcel Numbers: 7205-005-021, -024, -025, -026, and -027) that total 2.31 acres (100,623 square feet). The project site is located partially in the Institutional Zone (I) and partially in the Midtown Specific Plan Transit Node (SP-1-TN) district and has a General Plan Land Use Designation of Neighborhood Serving Center or Corridor Low Density (NSC-L) (the parcels in the Institutional zone) and Transit Oriented Development Low Density (TOD-L) (the parcels of the project site located in the Midtown Specific Plan). The project site is currently developed with a transitional kindergarten, elementary and middle school. The project site also contains a commercial office building that houses a doctor's office, a classroom, and a storage area for one of the parish ministries located to the northeast of the school across an existing alley.

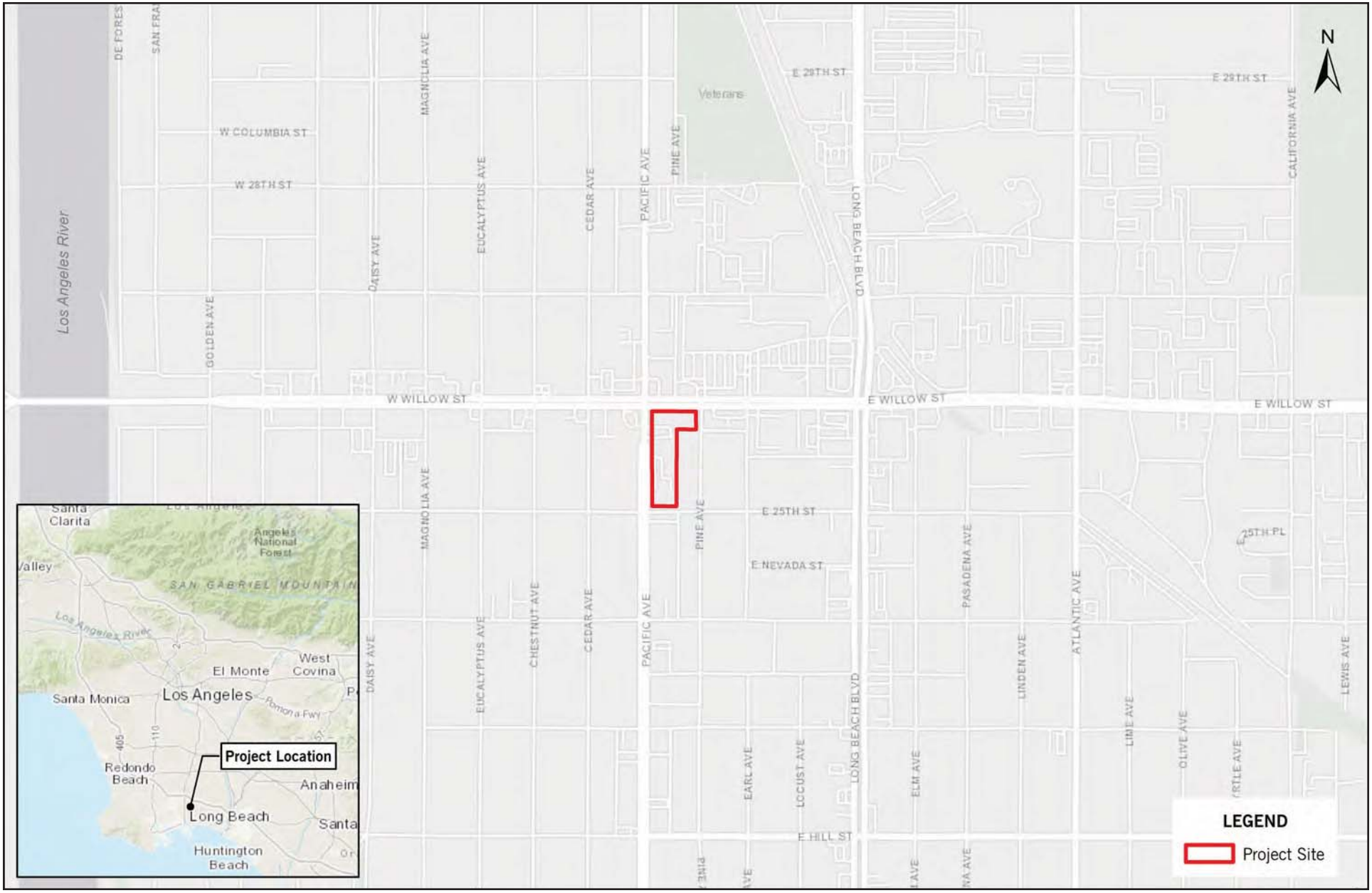
The location of the project site, which is located in an urban area of the City surrounded by commercial and residential uses, is shown in **Figure 2-1**. The property to the north of the site is zoned Midtown Specific Plan Transit Node (SP-1-TN); the property to the east is zoned residential; properties to the south and west are zoned commercial. An aerial photograph depicting the project site and surrounding land uses is presented in **Figure 2-2**.

2.2 PROPOSED PROJECT

The proposed project consists of a three-phased development to expand the existing parish school and construct a new church, rectory, convent, and gymnasium near the existing school to develop a cohesive campus. Each phase would be completed before the start of the subsequent phase. The three phased expansion would include a parish office, a two-story school building, a single-story gymnasium, a rectory, a convent, and a church. Phasing Plans are depicted in **Figure 2-3**. The phasing would be as follows:

Phase 1: Demolition of three one-story wood structures totaling 1,674 square feet, a metal canopy, the existing playground, and 27 parking stalls. New construction would include a 19,378-square-foot two-story school building consisting of eight classrooms, administration space, and a library. No additional parking is to be constructed at this time with 105 parking spaces to remain. The existing parish hall and convent would remain during this phase.

Phase 2: Demolition of the 7,812-square-foot parish hall located near the east property line and the 5,439-square-foot corner commercial office building located to the east across the existing alley. A 9,414-square-foot single-story gymnasium would be constructed in the northeast corner of the project site. The gymnasium would include a small kitchen, stage, and restrooms.



Source: TAHA, 2021.

Holy Innocents Parish Church and School
Initial Study/Mitigated Negative Declaration

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CITY OF LONG BEACH

FIGURE 2-1

PROJECT LOCATION

Source: TAHA, 2021.

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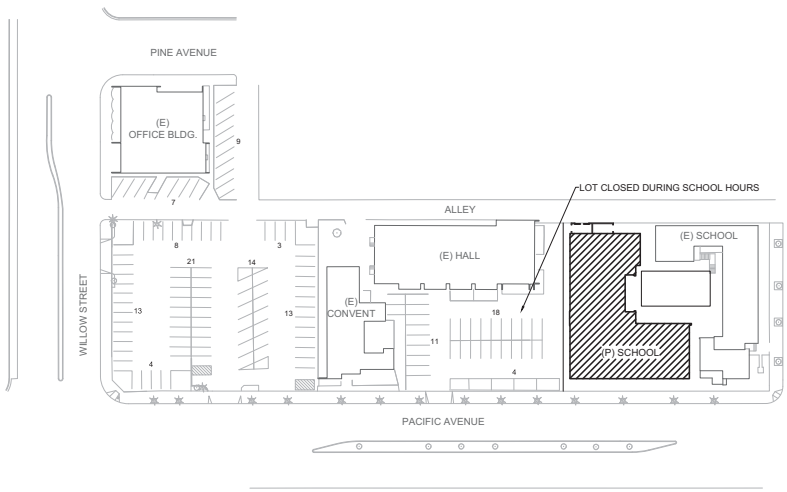
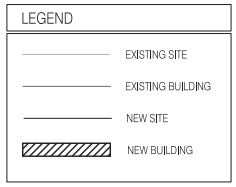
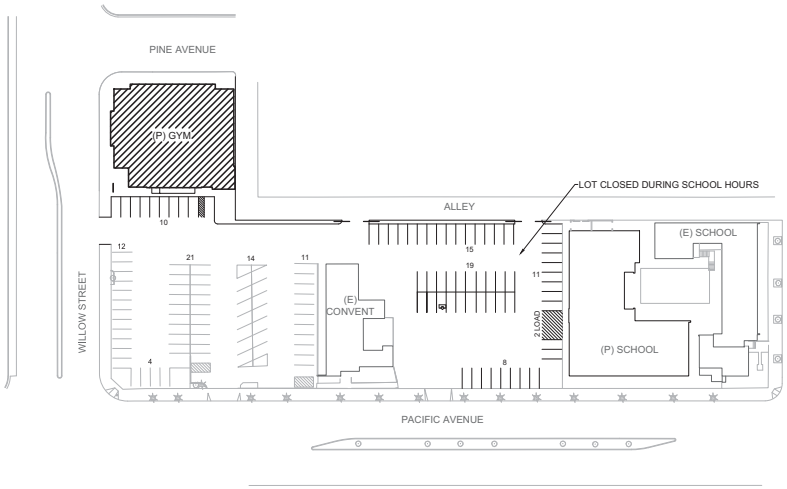
FIGURE 2-2

SURROUNDING LAND USES

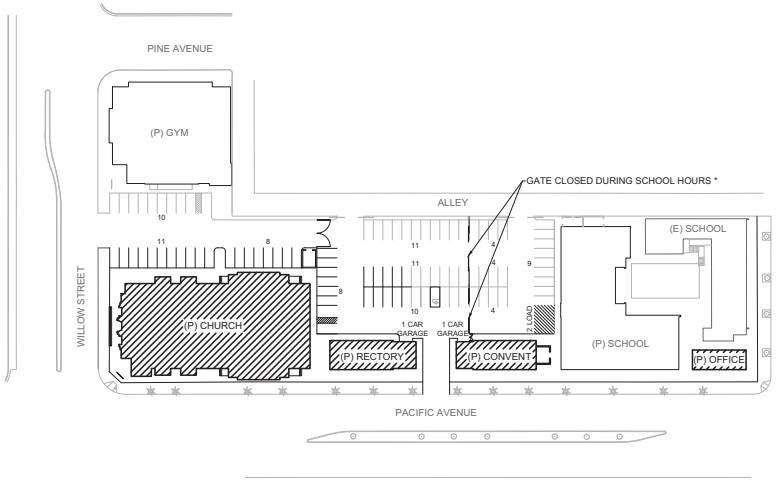


PHASE 1 SITE PLAN
SCALE: 1" = 50'





PHASE 2 SITE PLAN
SCALE: 1" = 50'



PHASE 3 SITE PLAN
SCALE: 1" = 50'

Source: Harrison Design, 2022.

FIGURE 2-3

PHASING PLANS

Phase 3: Demolition of the 5,193-square-foot seven-bedroom convent and 1,100-square-foot single-story school office. Construction would include the 19,532-square-foot church, 3,433 square-foot two-story rectory, 3,298-square-foot two-story convent and 1,680-square-foot two-story parish office. The church structure would include a single-story assembly area, a basement area with restrooms, storage, and mechanical room, and a choir loft. The rectory would consist of three bedrooms, one full kitchen, three bathrooms, one powder room, two studies, one private chapel, and a one-car garage. The convent would consist of five bedrooms, one full kitchen, two bathrooms, one powder room, one private chapel, and a one-car garage. The parish office would include office area, conference rooms, and a lobby.

The heights of the proposed buildings would vary. In the Midtown Specific Plan, the proposed project includes the construction a 40-foot - 10-inch single-story gym and a 51-foot – 10-inch single-story church with an architectural feature extending to 75-foot in height. A maximum height of 65-feet, plus an additional 10-foot for architectural projections is permitted in the Midtown Specific Plan area. In the Institutional Zone, the proposed project includes the construction of a two-story 29-foot – 5-inch school, a 21-foot – 9-inch two-story convent, a 21-foot – 11-inch two-story rectory, and a 21-foot – 2-inch two-story parish school office. A maximum of 30-foot, or one-foot for each two-foot of distance from abutting residential district, whichever is greater is permitted in this zone. All structures within the institutional zone are proposed to be less than 30-foot in height. Rendered Street Elevations of the proposed project are presented in **Figures 2-4** and **2-5**.

The proposed project includes a request for an 18-foot x 110-foot portion of the alley located off of Willow Avenue along the east property line to be vacated as part of the Tentative Parcel Map request to allow for improved access, additional parking, and to connect the project site to the adjacent parcel, also owned by the project applicant, that contains an existing commercial office building in order to improve overall on-site circulation and connectivity. The southern portion of the alley would remain and continue to provide access to the adjacent residential properties along the east of the alley and provide access to the parking lot of the parish campus.

The proposed circulation plan presented in **Figure 2-6** shows access to the project site includes inbound vehicle access provided at the driveway along Willow Street (right-turn in only), with outbound vehicle access provided at the driveway along Pacific Avenue (right-turn out only). This configuration would allow for adequate on-site queuing space for vehicles (within the parking lot), thus avoiding spillback onto public streets. With the right-turn only configuration at the two access points, some vehicles will need to either need to make a U-turn or circulate on local streets. For example, outbound vehicles destined for the south would not be able to turn left onto Pacific Avenue (due to the raised median). Instead, these vehicles would either need to make a northbound-to-southbound U-turn at the Pacific Avenue/Willow Street intersection, or a left or right-turn at the Pacific Avenue/Willow Street intersection to utilize a local street to travel southbound. In order to prevent cut-through traffic on Pine Avenue, the applicant work with the City to eliminate the westbound left-turn pocket at the Willow Street/Pine Avenue intersection and provide a median to enforce left turn restrictions. It is recommended that the median be constructed using bollards or delineators, as opposed to a concrete/raised median.

Source: Harrison Design, 2022.

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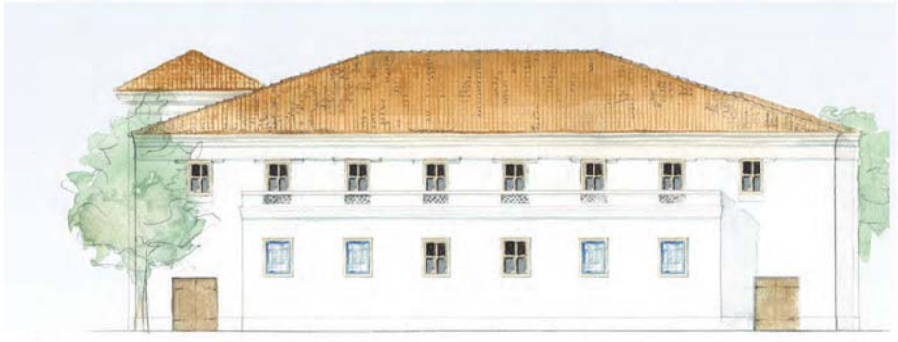
FIGURE 2-4

RENDERED STREET ELEVATIONS 1



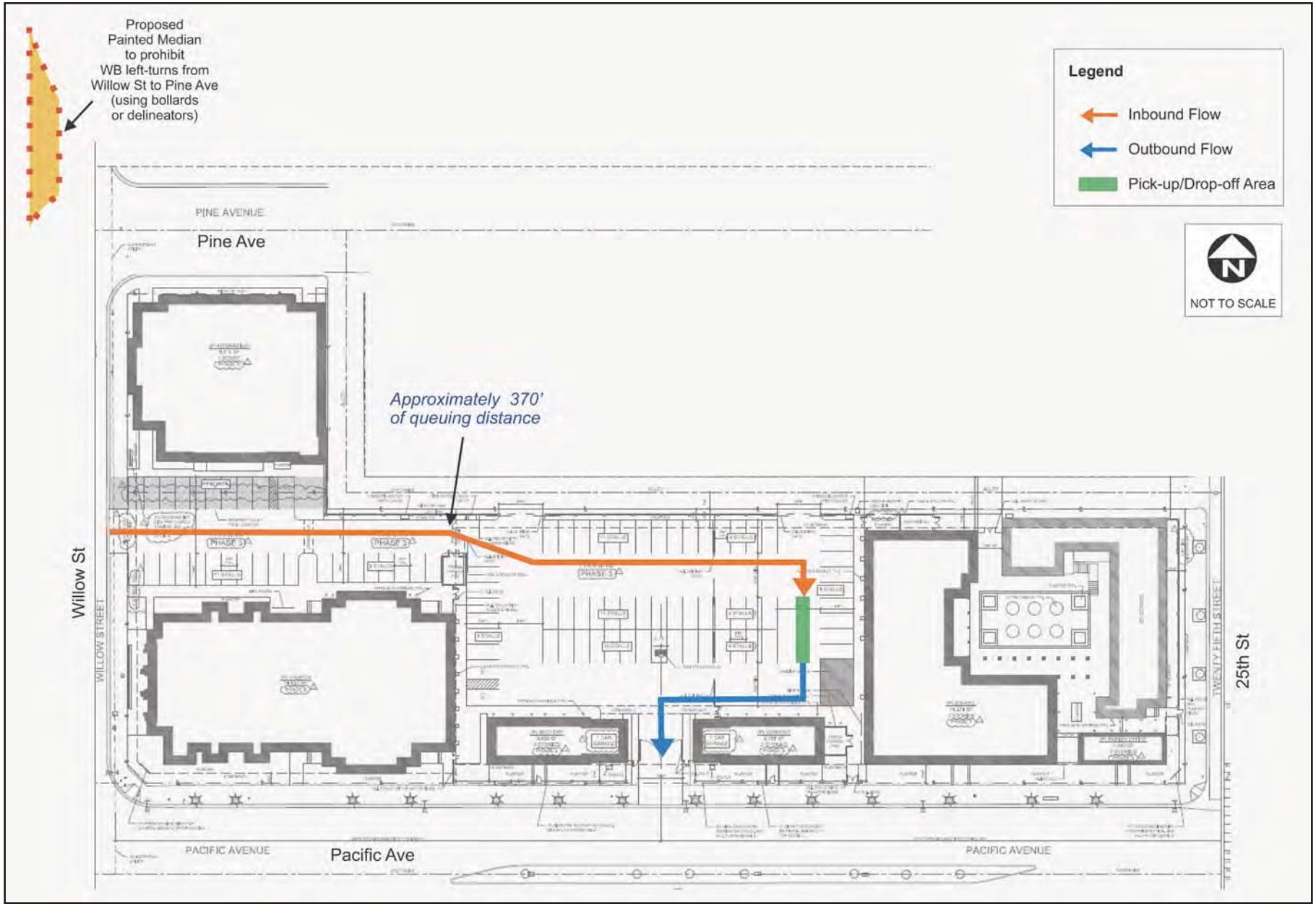
PINE AVENUE ELEVATION
SCALE: 1/16" = 1'-0"

WILLOW STREET ELEVATION
SCALE: 1/16" = 1'-0"

Source: Harrison Design, 2022.

FIGURE 2-5

RENDERED STREET ELEVATIONS 2



Source: Iteris, 2022.

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FIGURE 2-6

PROPOSED CIRCULATION PLAN

2.3 PROPOSED OPERATIONS

The proposed project would include the expanded operations of the school, in addition to the construction of the new gymnasium, church, rectory, and convent. Anticipated hours of operation are:

School: Monday – Friday 7:30 am - 5:30 pm
Parish School Office: Monday – Friday 9:30 am - 3:30 pm; Sun 10:30 am - 2:00 pm
Gymnasium: 8:00 am - 5:00 pm
Church: 6:30 am - 8:00 pm

School Operations. The parish school currently offers education for grades transitional kindergarten through 8th grade. The new school building would enable the parish school to include instruction for 9th through 12th grades. There would be 22-23 students in each grade level. The student body would be made up of roughly 315 students, 16 teachers, six aids, two facility staff, one main office secretary and one business office staff. The gymnasium would hold a range of events including basketball, volleyball, physical education class, theater, parent/community meetings and events, dances and be used for general cafeteria use.

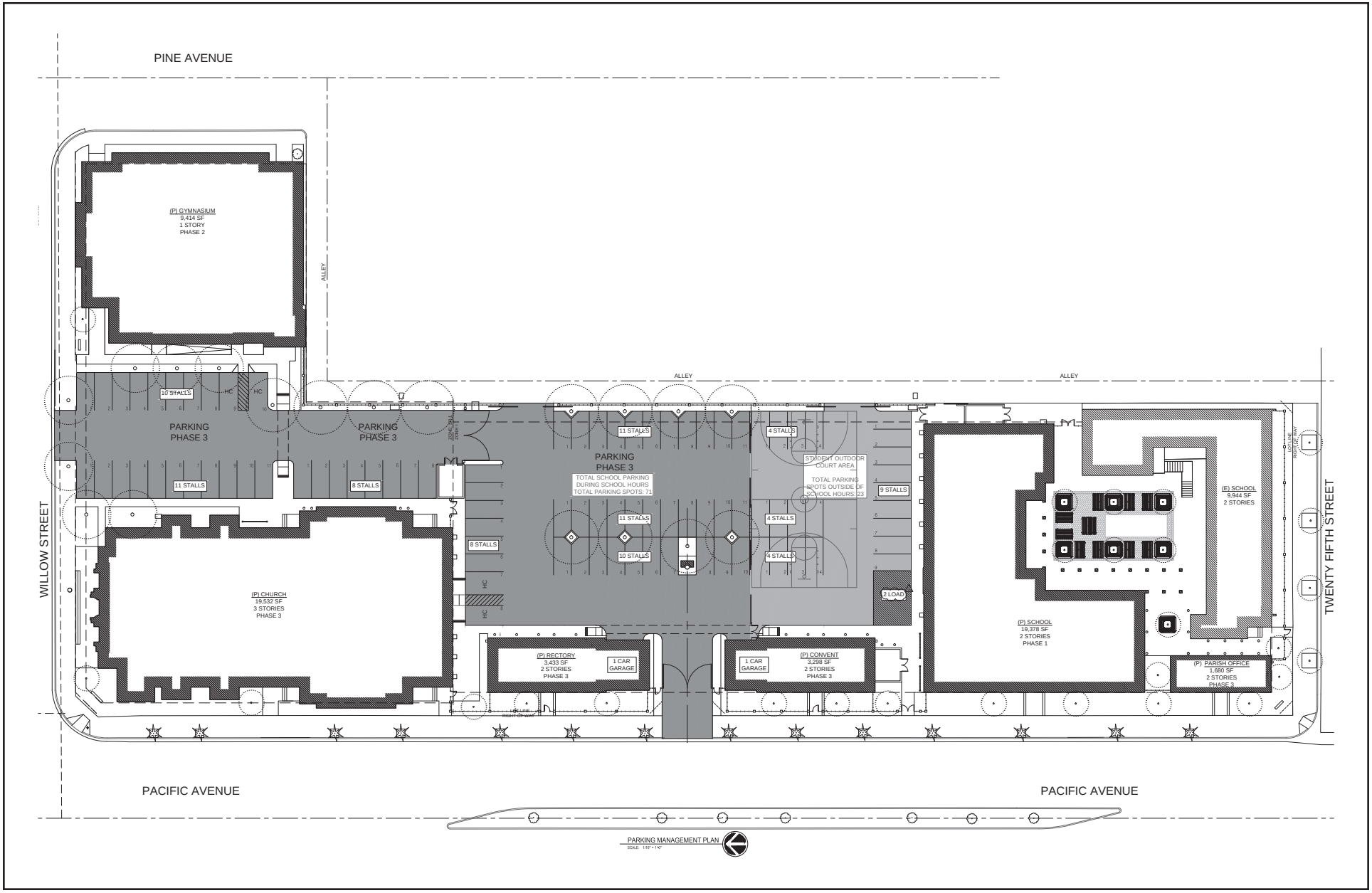
Church Operations. Weekday masses would be offered at 8:00 am and 7:00 pm, and confessions are scheduled for 7:00 pm on Fridays. Approximately 30-40 people attend weekday masses. Saturday masses are held at 8:00 am and 5:00 pm. Approximately 30-40 people attend the morning mass and approximately 250 attend the evening mass. Weddings and funerals are also scheduled on many Saturdays. Sunday masses run from 7:00 am to 2:00 pm with an hour between each service to allow ample time for attendees to vacate the parking lot before the next group arrives. Approximately 250 people and two to three administration staff attend Sunday masses. The church would be open ahead of each mass to allow for quiet reflection and prayer.

In addition to church services, the project site would house the parish Pastor, Parochial Vicar, and The Carmelite Sisters of the Most Sacred Heart in the rectory and convent. Each priest has a vehicle and the Carmelite Sisters share one vehicle, for a total of three vehicles for religious staff.

There are currently a total of 132 parking spaces on the project site. In Phase 1, 27 existing parking stalls will be demolished, leaving the site with 105 parking spaces to remain. In Phase 2, 7,812 square feet of the parish hall and 5,439 square feet corner commercial office building will be demolished, allowing for an additional 22 parking stalls for a total of 127 spaces. In Phase 3, the single-story school office and 7-bedroom convent will be demolished. In this phase a total of 91 parking spaces are provided including 89 spaces in the interior on-site surface parking lot, an additional two parking spaces are provided within two single-car garages located within the rectory and convent, plus two loading spaces for trucks (grand total of 93 on-site spaces). The parking Management Plan is presented in **Figure 2-7**.

2.4 CONSTRUCTION SCHEDULE

As previously discussed, the proposed project would be implemented in three distinct phases, and each phase would be completed before the start of the subsequent phase. Phase 1 construction activities would begin in August 2023 and be completed by August 2024. Phase 2 construction activities would begin in September 2024 and be completed by May 2025. Phase 3 construction activities would begin in December 2025 and be completed by April 2027. Construction activities would be limited to the hours of 7:00 am to 7:00 pm during the weekdays and federal holidays and 9:00 am to 6:00 pm on Saturdays pursuant to Section 8.80.202 of the Long Beach Municipal Code (LBMC).



Source: Harrison Design, 2022.

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FIGURE 2-7

PARKING MANAGEMENT PLAN

3.0 INITIAL STUDY CHECKLIST AND EVALUATION

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

DETERMINATION: (To be completed by the Lead Agency):

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant" 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 ENVIRONMENTAL IMPACT REPORT 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.

Cynthia de la Torre
Signature

January 3, 2023
Date

Cynthia de la Torre
Printed Name

For

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.1 AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) 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**. A scenic vista is defined as a public viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Scenic vistas of the San Gabriel Mountains to the north, the Santa Ana Mountains to the east, and the Palos Verdes Hills to the west are available within the vicinity of the project site. However, the project site is located in an urbanized area of the City surrounded by commercial and residential uses. In addition, the project site and the surrounding area are generally characterized by flat topography. Because of the area's flat topography and intervening buildings, public views within the project area are primarily limited to street corridors. The project site is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building. The proposed project involves the expansion of the existing school to include instruction for 9th through 12th grades and the addition of parish- and school-related facilities. The three phased expansion would include the construction of a two-story parish office, a two-story school building, a single-story gymnasium, a two-story rectory, a two-story convent, and a single-story church. The project plans will be submitted to the Planning Commission for approval through the site plan review procedure. Therefore, no impact on scenic vistas would occur, and no mitigation measures would be required.

b) **No Impact**. A significant impact would occur if the proposed project would substantially damage scenic resources within a state scenic highway. The project site is not located within the vicinity of a scenic highway. The nearest Eligible State Scenic Highway (not officially designated) is a segment of Pacific Coast Highway, located approximately four miles to the southeast of the project site.[5] The project site is devoid of natural features such as trees, rock outcroppings or other identified scenic resources. The existing

[5]California Department of Transportation, *California State Scenic Highway System Map*, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed May 2022.

elementary and middle school and the commercial office building on the project site are not historic structures. Vegetation on-site is limited to ornamental landscaping and a few trees. Therefore, no impact on scenic resources within a state-designated scenic highway would occur, and no mitigation measures would be required.

c) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would degrade the existing visual character or quality of public views of the site and its surroundings. Public views are those that are experienced from a publicly accessible vantage point, such as a roadway or public park. As discussed in Response to Checklist Questions 3.1a above, public views within the project area are primarily limited to street corridors as the project site is located in an urbanized area and the project site and surrounding area are generally characterized by flat topography. The site is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial building. The project site is located partially in the Institutional Zone (I) and partially in the Midtown Specific Plan Transit Node (SP-1-TN) district and has a General Plan Land Use Designation of Neighborhood Serving Center or Corridor Low Density (NSC-L) (the parcels in the Institutional zone) and Transit Oriented Development Low Density (TOD-L) (the parcels of the project site located in the Midtown Specific Plan). In the Midtown Specific Plan (SP-1), the proposed project includes the construction a 40-foot – 10-inch single-story gym and a 51-foot – 10-inch single-story church with an architectural feature extending to 75-foot in height. A maximum height of 65-feet, plus an additional 10--foot for architectural projections is permitted in the Midtown Specific Plan. In the Institutional Zone, the proposed project includes the construction of a two-story 29-foot – 5-inch school, a 21-foot – 9-inch two-story convent, a 21-foot –11-inch two-story rectory, and a 21-foot – 2-inch two-story parish school office. A maximum of 30 feet, or one foot for each two-foot of distance from abutting residential district, whichever is greater is permitted in this zone. All structures within the institutional zone are proposed to be less than 30-foot in height. The proposed project would alter the visual character of the project site; however, the proposed project would be compatible with the surrounding area and designed to comply with applicable design guidelines in the Midtown Specific Plan and Chapter 21.34 Institutional District of the LBMC. The project plans will be submitted to the Planning Commission for approval through the site plan review procedure. Therefore, the proposed project would not degrade the visual character or quality of the project site and surrounding area. A less-than-significant impact would occur, and no mitigation measures would be required.

d) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. As discussed in Response to Checklist Questions 3.1c above, the project site is located in urbanized area of the City surrounded by commercial and residential uses. Existing nighttime lighting sources in the surrounding area include streetlights, vehicle headlights, and interior and exterior building illumination from the surrounding uses. The proposed project would introduce new lighting to the project site; however, lighting levels would be consistent with existing nighttime lighting levels of the surrounding area. In addition, most of the operations on-site would occur during the daytime. The school would operate Monday – Friday 7:30 am - 5:30 pm. The parish school office would operate Monday – Friday 9:30 am - 3:30 pm; Sunday 10:30 am - 2:00 pm. The gymnasium would operate from 8:00 am - 5:00 pm, and the church would operate from 6:30 am - 8:00 pm. The proposed project does not include features that would be a major source of glare during the day and night. In compliance with

Section 5.11 of Midtown Specific Plan and Section 21.41.259 (Parking areas - Lighting), lighting would be shielded away from adjacent properties and would not cause light to spill over onto the surrounding residential properties. The proposed buildings would be constructed with primarily non-reflective materials. The use of glass would be limited to windows and is not expected to generate substantial amount of glare that would affect the surrounding uses. Construction activities would occur in accordance with LBMC Section 8.80.202 (Construction Activity – Noise Regulations) which states that no construction or repair work shall be performed between the hours of 7:00 pm and 7:00 am on Monday through Friday and federal holidays occurring on weekdays. Therefore, construction activities would occur primarily during the daylight hours. Construction-related illumination would be used for safety and security purposes only and would be directed so that no direct beam illumination would extend beyond the project site. Any potential for daytime glare during construction would be short-term given the movement of equipment and materials during construction activities Therefore, a less-than-significant impact related to lighting and glare would occur, and no mitigation measures would be required.

Midtown Specific Plan EIR

Impacts related to Aesthetics were determined to be less than significant, and no mitigation measures were required for projects within the Midtown Specific Plan area. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.2 AGRICULTURE AND FORESTRY 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:				
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 the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

a-b) No Impact. A significant impact would occur if the proposed project would convert valued farmland to non-agricultural uses, conflict with existing agricultural zoning, or be located on agricultural parcels under a Williamson Act contract. No agricultural uses or related operations are present within the project site or in the surrounding area. The project site is located in an urbanized area of the City and is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building. There are no areas within the City that are designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on maps prepared as part of the Farmland Mapping and Monitoring Program of the California Resources Agency.[6] Additionally, there are no areas currently zoned for agricultural uses or areas that are designated as Williamson Act contract lands in the project area. Therefore, no impact to agricultural resources would occur, and no mitigation measures would be required.

[6]California Department of Conservation, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed January 2022.

c-d) **No Impact**. A significant impact would occur if the proposed project would conflict with existing zoning for forest land or timberland, cause the rezoning of forest land or timberland, result in the loss of forest land, or convert forest land to non-forest use. There are no properties within the City that are currently being used for timberland production, are zoned as forest land or timberland, or contain forest land or timberland. Therefore, no impact related to forestland would occur, and no mitigation measures would be required.

e) **No Impact**. A significant impact would occur if the proposed project would cause the conversion of farmland or forest land to non-agricultural or forest use, respectively. As discussed in Response to Checklist Questions 3.2a through 3.2d above, no agricultural or forestry operations occur in the project area. The proposed project would not introduce any changes that would result in the conversion of farmland or forest land to non-agricultural or forest use, respectively. Therefore, no impact would occur, and no mitigation measures would be required.

Midtown Specific Plan EIR

No impacts related to Agricultural Resources were identified, and no mitigation measures were required for projects within the Midtown Specific Plan area. The CEQA environmental checklist has been updated since the Midtown Specific Plan EIR was certified, and impacts related to Forestry Resources were not specifically evaluated. Nonetheless, as discussed in the responses to the Initial Study checklist questions above, impacts related to Forestry Resources have been evaluated for the proposed project, and no impacts would occur. The environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

A technical air quality analysis has been conducted for the proposed project and is included in Appendix A of this IS/MND.

a) **Less-Than-Significant Impact**. The project site is located in the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The applicable air quality plan is the SCAQMD 2016 Air Quality Management Plan (AQMP), which is based on regional growth population and employment projections provided in the Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal Plan). The AQMP provides policies and control measures that will reduce emissions to attain both state and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the SCAB must demonstrate that daily construction and operational emissions thresholds, as established by SCAQMD, would not be exceeded. The environmental review must also demonstrate that individual projects would not increase the number or severity of existing air quality violations.

The SCAQMD CEQA Air Quality Handbook identifies two key indicators of consistency with the AQMP: 1) whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plan; and 2) whether the project would exceed the forecasted growth incorporated into the AQMP. With regards to the first consistency criterion, the SCAQMD has developed regionally specific air quality significance thresholds to assess potential impacts that may result from construction and operation of projects. Daily emissions of volatile organic compounds (VOC), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), respirable particulate matter less than 10 microns in diameter (PM_{10}), and fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) should be quantified and assessed on both regional and localized scales, in accordance with SCAQMD methodology. With regards to the second consistency criterion, the population and employment assumptions used to estimate regional emissions in the AQMP are obtained from SCAG projections for cities and unincorporated areas within the SCAQMD

jurisdiction. Projects that are consistent with regional growth projections are generally consistent with the AQMP.

Consistency Criterion 1: Air Quality Emissions

Construction Emissions. Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips by construction workers and haul trucks traveling to and from the project site. Fugitive dust emissions would primarily result from site preparation (e.g., demolition and grading) activities. NO_X emissions would predominantly result from the use of construction equipment and haul truck trips. The assessment of construction air quality impacts considers all of these emissions sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. It is mandatory for all construction projects in the SCAB to comply with SCAQMD Rule 403 for Fugitive Dust and Rule 1113 for Architectural Coatings, as described below as Regulatory Compliance Measures (RCMs).

RCM-AQ-1: Rule 403 control requirements include best management practices (BMPs) to prevent the generation of visible dust plumes. BMP strategies include, but are not limited to:

- Backfilling: Backfill material stabilization when actively handling or inactive and stabilize soil at completion of activity.
- Clearing/Grubbing: Maintain stability of soil through watering of site prior to, during, and after all clearing/grubbing activities.
- Cut and Fill: Pre-water soils prior to cut and fill activities using water trucks; stabilize soil during and after activities.
- Debris Hauling: All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- Demolition Activities: Prohibit demolition activities when wind speeds exceed 25 mph; apply water to disturbed soils after demolition is completed or at the end of each day of cleanup.
- Disturbed Soil: Stabilize disturbed soil throughout the construction site by limiting vehicular traffic and disturbance on soil where possible and applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes (Rule 401 – Visible Emissions).
- Disturbed Surface Areas: Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface; apply water at three-hour intervals to at least 80 percent of the un-stabilized area.
- Earth-Moving Activities: Pre-apply water to depth of proposed cuts and reapply as necessary to maintain soils in a damp condition and to ensure that visible dust plumes do not exceed 100 feet in any direction.
- Importing/Exporting of Bulk Materials: Stabilize material with tarps or other suitable enclosures on trucks while loading/unloading to reduce fugitive dust emissions and maintain at least six inches of freeboard on haul vehicle; provide water during loading/unloading to prevent dust plumes.

- Staging Areas and Unpaved Roads: Stabilize surface areas and limit vehicle speeds to 15 miles per hour.
- Stockpiles/Bulk Material Handling: stabilize stockpiled materials with intermittent watering and limit stockpiles to eight feet in height within 100 yards of off-site occupied buildings.
- Trenching: Stabilize surface soils with pre-watering where trencher or excavator and support equipment will operate; wash mud and soils from equipment at completion of activities

Compliance with the provisions and best management practices propagated by Rule 403—such as the application of water as a dust suppressant to exposed stockpiles and disturbed ground surfaces—would reduce regional fugitive dust PM_{10} and $PM_{2.5}$ emissions associated with construction activities by approximately 61 percent.

RCM-AQ-2: In accordance with SCAQMD Rule 1113, applicants for new development projects shall require the construction contractor to use coatings and solvents with a volatile organic compound (VOC) content consistent with the specifications set forth in SCAQMD Rule 1113. The construction contractor shall also use precoated/natural-colored building materials, where feasible.

Table 3-1 shows the maximum unmitigated daily emissions that would be generated by sources involved in construction of Phase 1 for each activity, differentiated by source location either on-site of off-site to facilitate the analysis of both regional and localized emissions. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

Table 3-2 shows the maximum unmitigated daily emissions that would be generated by sources involved in construction of Phase 2 for each activity, differentiated by source location either on-site of off-site to facilitate the analysis of both regional and localized emissions. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

Table 3-3 shows the maximum unmitigated daily emissions that would be generated by sources involved in construction of Phase 3 for each activity, differentiated by source location either on-site of off-site to facilitate the analysis of both regional and localized emissions. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

TABLE 3-1: ESTIMATED DAILY CONSTRUCTION EMISSIONS – PHASE 1

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition						
On-Site Emissions	0.6	5.5	7.3	<0.1	0.4	0.3
Off-Site Emissions	0.1	1.4	1.0	<0.1	0.4	0.1
Total	***0.7***	***6.9***	***8.3***	***<0.1***	***0.8***	***0.4***
Site Preparation						
On-Site Emissions	0.5	5.3	5.0	<0.1	0.5	0.2
Off-Site Emissions	0.1	0.1	0.7	<0.1	0.2	0.1
Total	***0.6***	***5.4***	***57***	***<0.1***	***0.7***	***0.3***
Building Construction						
On-Site Emissions	0.5	5.6	8.9	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.6	1.2	<0.1	0.1	0.1
Total	***0.6***	***6.2***	***10.1***	***<0.1***	***0.3***	***0.3***
Paving						
On-Site Emissions	0.4	3.4	4.6	<0.1	0.2	0.2
Off-Site Emissions	<0.1	0.3	0.4	<0.1	0.2	<0.1
Total	***0.4***	***3.7***	***5.0***	***<0.1***	***0.3***	***0.2***
Architectural Coating						
On-Site Emissions	12.2	1.6	2.6	<0.1	0.1	0.1
Off-Site Emissions	<0.1	0.2	0.4	<0.1	0.1	<0.1
Total	***12.2***	***1.8***	***3.0***	***<0.1***	***0.2***	***<0.1***
Building Construction + Paving + Architectural Coating						
On-Site Emissions	13.0	10.6	16.1	<0.1	0.5	0.4
Off-Site Emissions	0.2	1.2	2.0	<0.1	0.7	0.2
Total	***13.2***	***11.8***	***18.1***	***<0.1***	***1.2***	***0.6***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**13.2**	**11.8**	**18.1**	**<0.1**	**1.2**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	--	**10.6**	**16.1**	--	**0.5**	**0.4**
Localized Significance Threshold	--	57	585	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Numbers may not add precisely due to rounding.
SOURCE: TAHA, 2022.

TABLE 3-2: ESTIMATED DAILY CONSTRUCTION EMISSIONS – PHASE 2

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition						
On-Site Emissions	0.6	5.8	7.6	<0.1	0.5	0.3
Off-Site Emissions	0.1	1.7	1.4	<0.1	0.6	0.2
Total	***0.8***	***7.5***	***8.9***	***<0.1***	***1.1***	***0.5***
Site Preparation						
On-Site Emissions	0.5	5.3	5.6	<0.1	0.3	0.2
Off-Site Emissions	0.1	0.1	0.9	<0.1	03	0.1
Total	***0.6***	***5.3***	***5.6***	***<0.1***	***0.7***	***0.3***
Building Construction						
On-Site Emissions	0.5	5.7	9.4	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.7	1.5	<0.1	0.5	0.2
Total	***0.6***	***6.4***	***10.9***	***<0.1***	***0.8***	***0.4***
Paving						
On-Site Emissions	0.5	3.2	4.6	<0.1	0.2	0.1
Off-Site Emissions	<0.1	0.3	0.4	<0.1	0.2	0.1
Total	***0.5***	***3.5***	***5.0***	***<0.1***	***0.3***	***0.2***
Architectural Coating						
On-Site Emissions	6.5	1.5	2.6	<0.1	0.1	0.1
Off-Site Emissions	<0.1	0.2	0.4	<0.1	0.1	<0.1
Total	***6.5***	***1.7***	***3.0***	***<0.1***	***0.2***	***0.1***
Building Construction + Paving + Architectural Coating						
On-Site Emissions	7.4	10.5	16.7	<0.1	0.4	0.4
Off-Site Emissions	0.2	1.2	2.2	<0.1	0.9	0.2
Total	***7.7***	***11.6***	***18.9***	***<0.1***	***1.3***	***0.6***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**7.7**	**11.6**	**18.9**	**<0.1**	**1.3**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	--	**10.5**	**16.7**	--	**0.5**	**0.4**
Localized Significance Threshold	--	57	585	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Numbers may not add precisely due to rounding.
SOURCE: TAHA, 2022.

TABLE 3-3: ESTIMATED DAILY CONSTRUCTION EMISSIONS – PHASE 3

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition						
On-Site Emissions	0.7	5.9	8.6	<0.1	0.6	0.3
Off-Site Emissions	0.1	1.7	1.3	<0.1	0.6	0.2
Total	***0.8***	***7.6***	***9.9***	***<0.1***	***1.2***	***0.5***
Site Preparation						
On-Site Emissions	0.5	4.7	5.5	<0.1	0.3	0.2
Off-Site Emissions	0.1	<0.1	0.8	<0.1	0.3	0.1
Total	***0.6***	***4.7***	***6.3***	***<0.1***	***0.6***	***0.3***
Building Construction						
On-Site Emissions	0.4	5.0	8.9	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.6	1.3	<0.1	0.2	0.1
Total	***0.5***	***3.5***	***5.0***	***<0.1***	***0.3***	***0.2***
Paving						
On-Site Emissions	0.4	3.2	4.6	<0.1	0.2	0.1
Off-Site Emissions	<0.1	0.3	0.4	<0.1	0.2	0.2
Total	***0.4***	***3.5***	***5.0***	***<0.1***	***0.3***	***0.2***
Architectural Coating						
On-Site Emissions	16.3	1.5	2.6	<0.1	0.1	0.1
Off-Site Emissions	<0.1	0.2	0.3	<0.1	0.1	0.1
Total	***16.3***	***1.7***	***2.9***	***<0.1***	***0.2***	***0.1***
Building Construction + Paving + Architectural Coating						
On-Site Emissions	17.2	9.8	16.1	<0.1	0.4	0.4
Off-Site Emissions	0.2	1.1	2.0	<0.1	0.9	0.2
Total	***17.3***	***10.9***	***18.1***	***<0.1***	***1.2***	***0.6***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**17.3**	**10.9**	**18.1**	**<0.1**	**1.2**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	--	**9.8**	**16.1**	--	**0.4**	**0.4**
Localized Significance Threshold	--	57	585	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Numbers may not add precisely due to rounding.
SOURCE: TAHA, 2022.

Operational Emissions. The primary source of operational emissions associated with the proposed project would be automobile trips. Additional long-term area sources of emissions include landscaping equipment and natural gas combustion. Following completion of Phase 1, implementation of the proposed project would add 228 daily vehicle trips to the campus and following completion of Phase 3 an additional 136 trips would be generated associated with the church for a total of 364 daily trips. Due to the proximity of high quality transit stops, the traffic analysis applied a 10 percent trip reduction credit to the proposed project, resulting in a total of 328 daily trips. **Table 3-4** shows the emissions modeling results produced using CalEEMod, which demonstrates that the proposed project would not generate permanent pollutant emissions that would exceed SCAQMD thresholds, and air quality impacts would be less than significant.

TABLE 3-4: ESTIMATED DAILY OPERATIONAL EMISSIONS

Phase & Source	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
PHASE 1 (2024)						
Area Sources	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
Energy Sources	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile Sources	0.6	0.7	6.5	<0.1	1.5	0.4
2024 Operations Total	***1.1***	***0.8***	***6.5***	***<0.1***	***1.5***	***0.4***
PHASE 2 (2025)						
Area Sources	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Energy Sources	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile Sources	0	0	0	0	0	0
2024 + 2025 Operations Total	***1.4***	***0.9***	***6.6***	***<0.1***	***1.5***	***0.4***
PHASE 3 (2027)						
Area Sources	0.6	<0.1	0.2	<0.1	<0.1	<0.1
Energy Sources	<0.1	0.1	0.1	<0.1	<0.1	<0.1
Mobile Sources	0.3	0.3	2.4	<0.1	0.6	0.2
2024 + 2025 + 2027 Operations Total	***2.3***	***1.3***	***9.2***	***<0.1***	***2.1***	***0.6***
REGIONAL ANALYSIS						
Maximum Daily Operation Emissions	**2.3**	**1.3**	**9.2**	**<0.1**	**2.1**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

SOURCE: TAHA, 2022.

Consistency Criterion 2: AQMP Growth Forecasts

The second consistency criterion requires that the proposed project not exceed the assumptions in the AQMP, thereby rendering the regional emissions inventory inaccurate. The existing convent houses seven people and the proposed new convent and rectory would house eight people. The additional one resident added to the project site would have no potential to interfere with population or housing growth forecasts. The expansion of an existing school and the addition of church-related facilities would not require a substantial number of new employees at the project site. The proposed project would not be considered a significant project by the SCAQMD as it would not affect growth projections incorporated into the ambient air quality standard attainment timelines. The proposed project would not have any potential to result in growth that would exceed the projections incorporated into the AQMP or the RTP/SCS, and air quality impacts would be less than significant.

Summary

In summary, the proposed project would not result in daily emissions that exceed the applicable SCAQMD thresholds, which were established to ensure that individual projects would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP. Additionally, the

proposed project would not have the potential to result in population and employment growth that would exceed the growth projections incorporated into the AQMP. Therefore, the proposed project would be consistent with the AQMP, and a less-than-significant impact would occur.

b) **Less-Than-Significant Impact**. The SCAB is currently designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ under the State standards and nonattainment for O_3 and $PM_{2.5}$ under the federal standards. Therefore, a project may result in a cumulatively considerable air quality impact under this criterion if daily emissions of ozone precursors (VOC and NO_X) or particulate matter (PM_{10} and $PM_{2.5}$) exceed applicable air quality thresholds of significance established by the SCAQMD. The SCAQMD designed the significance thresholds to prevent projects from exceeding the ambient air quality standards and potentially resulting in air quality violations. The SCAQMD suggests that if any quantitative air quality significance threshold is exceeded by an individual project during construction activities or operation, that project is considered cumulatively considerable and would be required to implement effective and feasible mitigation measures to reduce air quality impacts.

Conversely, the SCAQMD propagates the guidance that if an individual project would not exceed the regional mass daily thresholds, then it is generally not considered to be cumulatively significant. This method of impact determination allows for the screening of individual projects that would not represent substantial new sources of emissions in the SCAB; it also serves to exclude smaller projects from the responsibility of identifying potentially concurrent new or proposed construction and operation emissions nearby since the incremental contribution to regional emissions is minor. As shown in above, implementation of the proposed project would not exceed any applicable SCAQMD regional mass daily thresholds during construction or operation. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter, and impacts would be less than significant.

c) **Less-Than-Significant Impact**. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The California Air Resources Board (CARB) has identified the following groups who are most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. SCAQMD has established 500 meters or 1,640 feet, as the distance for assessing localized air quality impacts. The proposed project is located in a residential area with the nearest sensitive receptors being single-family residences approximately 20 feet east from the project site across an existing alleyway.

Construction

The use of heavy-duty construction equipment and haul trucks during construction activities would release diesel PM to the atmosphere through exhaust emissions. Diesel PM is a known carcinogen, and extended exposure to elevated concentrations of diesel PM can increase excess cancer risks in individuals. However, carcinogenic risks are typically assessed over timescales of several years to decades, as the carcinogenic dose response is cumulative in nature. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. “Individual Cancer Risk” is the likelihood that a person continuously exposed to concentrations of

TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given short-term construction schedules for urban infill projects, these types of projects do not result in a long-term (i.e., 70-year) source of TAC emissions. Additionally, SCAQMD's CEQA guidance does not require a health risk assessment for short-term construction emissions. Short-term exposures to diesel PM would have to involve extremely high concentrations in order to exceed the SCAQMD air quality significance threshold of 10 excess cancers per million. It is, therefore, not necessary to quantitatively evaluate long-term cancer impacts from construction activities, which occur over a relatively short duration.

The proposed project is located in a residential area with the nearest sensitive receptors being single-family residences approximately 20 feet east from the project site across an existing alleyway. Sensitive receptors near construction activities would be exposed to diesel PM and other toxic air contaminants from engine exhaust. Over the course of approximately 38 months of construction activities, average diesel PM emissions from on-site equipment would be approximately 0.26 pounds per day. It is unlikely that diesel PM concentrations would be of any public health concern during the construction period, and diesel PM emissions would cease upon completion of construction activities. Therefore, the proposed project would result in a less-than-significant impact related to construction toxic air contaminants emissions.

Operations

The SCAQMD recommends that a health risk assessment be conducted for substantial sources of diesel PM emissions (e.g., truck stops and distribution facilities). The proposed project is not one that would generate a substantial number of heavy-duty truck trips within the region, such as a distribution warehouse. The proposed project involves the expansion of existing institutional uses, such as church and school uses, and it is anticipated that the proposed project would generate fewer truck trips than a typical commercial development and no other sources of operational air toxic emissions have been identified at the project site. Therefore, the proposed project would not result in an impact related to operational pollutants.

d) **Less-Than-Significant Impact**. Odors are the only potential emissions other than the sources addressed above in Response to Checklist Questions 3.3a through 3.3c.

Construction

Odors are the only potential construction emissions other than the sources addressed above. Potential sources that may produce objectionable odors during construction activities include equipment exhaust, application of asphalt and architectural coatings, and other interior and exterior finishes. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site and would be temporary in nature and would not persist beyond the termination of construction activities. The proposed project would utilize standard construction techniques, and the odors would be typical of most construction sites and temporary in nature. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. The construction contractor will ensure that activities comply with SCAQMD Rules 401 (Visible Emissions) and 402 (Nuisance) to prevent the occurrence of public nuisances and visible dust plumes traveling off-site. Therefore, the proposed project would not result in an impact related to construction odors and other nuisances.

Operation

Odors are the only potential operational emissions other than the sources addressed above. Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The operations would comply with SCAQMD Rule 402, which would prohibit any air quality discharge that would be a nuisance or pose any harm to individuals of the public. The City requires the proposed project to include a refuse enclosure that has sealed container to prevent odor spillage. In addition, solid waste generated by the proposed on-site uses would be collected by a contracted waste hauler, ensuring that odors resulting from on-site waste would be managed and collected in a manner to prevent the proliferation of odors. Therefore, the proposed project would not result in a significant impact related to operational odors or other nuisances.

Midtown Specific Plan EIR

The Midtown Specific Plan EIR identified significant impacts related to Air Quality that were determined to remain significant and unavoidable despite the implementation of mitigation measures. However, the air quality analysis for the proposed project determined that impacts would be less than significant, and therefore implementation of the mitigation measures included in the Midtown Specific Plan EIR are not warranted in this instance.:

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.4 BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☑	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?	☐	☐	☐	☑
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) **No Impact**. A significant impact would occur if the proposed project would cause the loss or destruction of individuals of a candidate, sensitive, or special status species or through the degradation of sensitive habitat. The project site is located in an urbanized area of the City and is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building. The site is surrounded by commercial and residential uses. Existing vegetation on-site is limited to ornamental landscaping and a few trees. Plant life on the project site is limited to non-native and ornamental species used for landscaping. Animal life is comprised of common bird, insect, reptile, and small mammal species. The entire project site has been previously disturbed and does not contain suitable habitat for sensitive species. Therefore, no impact related the loss of sensitive species or habitat would occur, and no mitigation measures would be required.

b) **No Impact**. A significant impact would occur if any riparian habitat or other sensitive natural community would be lost or destroyed as a result of urban development. There are no water bodies or riparian habitat on the project site, which is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, a parish hall, a convent, and a commercial office building. The project site is located in an urbanized area of the City surrounded by commercial and residential

uses. No riparian habitats or other sensitive natural communities are present in the vicinity of project site. Therefore, no impact would occur, and no mitigation measures would be required.

c) **No Impact**. A significant impact would occur if federally protected wetlands would be modified or removed as a result of the proposed project. No intermittent streams or riparian vegetation are located within or adjacent to the project site, and the project site does not contain any state or federally protected wetlands. The project site is located in an urbanized area of the City and is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, a parish hall, a convent, and a commercial office building. The proposed project would not have any 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. Therefore, no impact related to wetlands would occur, and no mitigation measures would be required.

d) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would interfere with, or remove access to, a migratory wildlife corridor or impede use of native wildlife nursery sites. The project site and the surrounding area are highly developed with urban uses, and no wildlife corridors are on or in proximity to the project site. The project site is located in an urbanized area of the City and is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, a parish hall, a convent, and a commercial office building. Existing vegetation on-site is limited to ornamental landscaping and a few trees. The project site does not contain any state or federally protected wetlands or other habitat that would contain migratory fish or other wildlife species. If migratory birds were to traverse the project site, the birds would likely utilize mature vegetation on the project site, some of which may potentially provide nesting sites for migratory birds. Any tree removal or trimming could potentially affect migratory birds; however, the proposed project is required to comply with the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC). To ensure that the proposed project complies with MBTA and CFGC, implementation of Mitigation Measure **BR-1** would be required.

e) **No Impact**. A significant impact would occur if the proposed project were inconsistent with local regulations pertaining to biological resources. The project site is not located on or near any significant ecological areas. The project site is located in an urbanized area of the City and is currently developed with an elementary and middle school, various wood structures, a metal overhand, a school office building, a parish hall, a convent, and a commercial office building. Existing vegetation on-site is limited to ornamental landscaping and a few trees. While trees on the project site would not be protected under Section 14.28 of the LBMC, the proposed project would be required to comply with the City's tree ordinance (Chapter 14.28 Trees and Shrubs), which regulates tree trimming and removal of any City-owned street trees and requires a permit to be obtained prior to cutting, trimming, removing, pruning, planting, injuring, or interfering with any City-owned street trees. Additionally, the proposed project would be required to comply with the City's landscape requirements. Therefore, no impact related to policies or ordinances protecting biological resources would occur, and no mitigation measures would be required.

f) **No Impact**. A significant impact would occur if the proposed project would conflict with other approved local, regional, or state habitat conservation plan. As discussed in Response to Checklist Questions 3.4a through 3.4e above, the project site is located in an urbanized area of the City and is currently developed with an elementary and middle school, various wood structures, a metal overhand, a school office building, a parish hall, a convent, and a commercial office building. Existing vegetation on-site is limited to ornamental landscaping and a few trees. The project site is not located within or adjacent to the boundaries of any adopted habitat conservation plans, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact related to habitat conservation plans would occur, and no mitigation measures would be required.

MITIGATION MEASURES

BR-1 All on-site tree removal and tree trimming activities shall be performed prior to or after the bird-breeding season of February 1st through August 15th (i.e., only between August 16 and January 31). If clearing/vegetation removal or tree trimming is planned to occur during the breeding season, a nest survey shall be conducted by a qualified biologist no more than one week prior to any clearing or tree trimming activities. Work may proceed only if no active bird nests are detected.

Midtown Specific Plan EIR

Impacts related to Biological Resources were determined to be less than significant, and no mitigation measures were required for projects within the Midtown Specific Plan area. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

a) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would cause a substantial adverse change in the significance of a historical resource. CEQA Guidelines Section 15064.5 generally defines a historical resource as any object, building, structure, site, area, place, record, or manuscript determined to be historically significant or significant in the architectural or cultural annals of California. Historical resources are further defined as being associated with significant events, important persons, or distinctive characteristics of a type, period or method of construction; representing the work of an important creative individual; or possessing high artistic values. The project site is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building. The existing structures proposed for demolition do not have any unusual characteristics and are not known to be associated with any national, regional, or local figures of significance that would qualify them as a historical resource or of historic significance. However, the existing horizontal metal louvers over the windows of the existing school building facing 25th Street were identified during the City's Site Plan Review process as an important feature in mid-century modern design. While the metal louvers are not proposed to be demolished, Mitigation Measure **CR-1** is recommended to document this character defining feature in a historic resources report prior to demolition or renovation activities.

b) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if a known or unknown archaeological resource would be removed, altered, or destroyed as a result of the proposed project. CEQA Guidelines Section 15064.5 defines significant archaeological resources as resources which meet the criteria for historical resources, as discussed above, or resources that constitute unique archaeological resources associated with a scientifically recognized important prehistoric or historic event or person. The project site is located in an urbanized area that has been subject to previous grading and development. Any surficial archaeological resources that may have existed on the project site are likely to have been previously disturbed or removed. Although no archaeological resources are known to exist on the project site, encountering unanticipated archaeological resources during ground disturbance is a possibility. In the event of an unanticipated discovery during construction, Mitigation Measure **CR-2** would reduce the potential for the destruction of any significant archaeological resource.

c) **Less-Than-Significant Impact**. A significant impact would occur if previously interred human remains would be disturbed during excavation of the project site. The project site is not part of a formal cemetery and is not known to have been used for disposal of historic or

prehistoric human remains. There are no known human remains on the project site, and human remains are not expected to be encountered during construction of the proposed project. While no formal cemeteries, other places of human interment, or burial grounds or sites are known to exist within the project site, there is always a possibility that human remains may be unexpectedly encountered during construction. In the unlikely event that human remains are encountered, the proposed project would be required to comply with California Health and Safety Code Section 7050.5. If human remains of Native American origin are discovered during construction, the proposed project would also be required to comply with applicable regulations related to the handling of Native American human remains, including Public Resources Code Section 5097. With compliance of the State Health and Safety Code Section 7050.5 and applicable regulations related to the handling of human remains of Native American origin, a less-than-significant impact would occur, and no mitigation measures would be required.

MITIGATION MEASURES

CR-1 Prior to demolition or renovation activities, a historic preservation professional qualified in accordance with the Secretary of the Interior's Standards shall complete a documentation report on the existing horizontal metal louvers over the windows of the existing school building facing 25th Street. The louvers over the windows shall be documented with archival quality photographs of a type and format approved by the City of Long Beach. This documentation, along with historical background of the property, shall be submitted to an appropriate repository approved by the City.

CR-2 If archaeological resources are encountered during ground-disturbing activities, all work shall cease in the area of the find or diverted away from the discovery to a distance of 50 feet. The City shall be immediately informed of the discovery and a qualified archaeologist shall be retained by the applicant to determine if the find is classified as a significant historical resource pursuant to CEQA Guidelines Section 15064.5(a) and/or unique archaeological resources (Public Resources Code Section 21083.2[g]). A qualified archaeologist is an archaeologist who meets or exceeds the Secretary of Interior's Professional Qualification Standards for archaeology. Personnel of the proposed project shall not collect or move any archaeological materials or associated materials. The qualified archaeologist shall be empowered to halt or divert ground disturbing activities.

If the resource is classified as a significant cultural resource, the qualified archaeologist shall make recommendations on the treatment and disposition of the find. The final recommendations on the treatment and disposition of the find shall be developed in accordance with all applicable provisions of Public Resources Code Section 21083.2 and CEQA Guidelines Sections 15064.5 and 15126.4. The City shall review and approve the recommendations prior to implementation. The City shall be provided with a final report on the treatment and disposition of the finding prior to issuance of a Certificate of Occupancy.

Midtown Specific Plan EIR

Mitigation measures were required for 66 properties within the Midtown Specific Plan area that were identified as "potential historic resources". The project site is not one of these properties, and no mitigation measures are required. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

a-b) Less-Than-Significant Impact. A significant impact would occur if the proposed project would result in the wasteful consumption of energy resources or conflict with or obstruct a state or local plan for energy efficiency. The main forms of available energy supply are electricity, natural gas, and oil. During construction of the proposed project, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control, powering lights, electronic equipment, or other construction activities that require electrical power. Construction activities typically do not involve the consumption of natural gas. Construction activities would consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment, round-trip construction worker travel to the project site, and delivery and haul truck trips. Construction activities would comply with CARB's "In-Use Off-Road Diesel Fueled Fleets Regulation", which limits engine idling times to reduce harmful emissions and reduce wasteful consumption of petroleum-based fuel. Additionally, the proposed project would comply with the California Renewable Portfolio Standard, the Clean Energy and Pollution reduction Act of 2015 (Senate Bill 350). Compliance with local, state, and federal regulations would reduce short-term energy demand during construction to the extent feasible, and project construction would not result in a wasteful or inefficient use of energy resources.

During operations of the proposed project, Southern California Edison would provide electricity and Southern California Gas would provide natural gas to the project site. Energy use associated with operation of the proposed project would be typical of school and church uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning, electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips. However, the proposed project does not involve any characteristics or processes that would require the use of equipment that would be more energy intensive than is used for comparable activities or involve the use of equipment that would not conform to current emissions standards and related fuel efficiencies. Therefore, a less-than-significant impact would occur, and no mitigation measures would be required.

Midtown Specific Plan EIR

The CEQA environmental checklist has been updated since the Midtown Specific Plan EIR was certified, and impacts related to Energy were not specifically evaluated. However, as discussed in the checklist questions above, impacts related to Energy have been evaluated for the proposed project, and no impact would occur. The environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

a.i) **No Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map. The Alquist-Priolo Earthquake Fault Zoning Act regulates development near active faults to mitigate the hazard of surface fault rupture. It prohibits the location of most structures for human occupancy across the trace of active faults. The Act also establishes Earthquake Fault Zones and requires geologic/seismic studies of all proposed developments within 1,000 feet of the zone. The Earthquake Fault Zones are delineated and defined by the State Geologist and identify areas where potential surface rupture along a fault could occur. Although there are several faults within the vicinity of the City, the project site is not located within the Alquist-Priolo Special Studies Zone.[7] Additionally, the proposed project would be constructed in accordance with the latest

[7]City of Long Beach, *Hazards Mitigation Plan*, February 28, 2017.

California Building Code (CBC) seismic safety requirements. In addition, the proposed project does not involve any activities that would potentially exacerbate existing environmental conditions so as to increase the potential to expose people or structures to the rupture of a known earthquake fault. The proposed project is typical of urban environments and would not involve deep excavation creating unstable seismic conditions that would result in the rupture of a fault. Therefore, no impact associated with rupture of a known earthquake fault would occur, and no mitigation measures would be required.

a.ii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to substantial adverse effects related to strong ground shaking from severe earthquakes. As with all properties in the seismically active Southern California region, the project site is susceptible to ground shaking during a seismic event. The ground motion characteristics of any future earthquakes in the region would depend on the characteristics of the generating fault, the distance to the epicenter, the magnitude of the earthquake, and the site-specific geologic conditions. The proposed project does not include activities that would increase the potential to expose people or structures to the adverse effects involving strong seismic ground shaking. Additionally, the design and construction of the proposed buildings are required to conform to the CBC seismic standards, as well as all other applicable codes and standards to reduce impacts from strong seismic ground shaking. Therefore, the proposed project would result in a less-than-significant impact, and no mitigation measures would be required.

a.iii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to substantial adverse effects related to seismic-related ground failure, including liquefaction. Liquefaction typically occurs when a saturated or partially saturated soil becomes malleable and loses strength and stiffness in response to an applied stress caused by earthquake shaking or other sudden change in stress conditions. Soil liquefaction occurs when loose, saturated, granular soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Liquefaction usually results in horizontal and vertical movements from the lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. The project site is not in a Liquefaction Potential Area.[8] Furthermore, the proposed project would be constructed in accordance with the CBC seismic standards. Compliance with the CBC and implementation of the recommendations contained within a site-specific soils engineering report would assure that building foundations are appropriate to site conditions. Therefore, the proposed project would result in a less-than-significant impact, and no mitigation measures would be required.

a.iv) **No Impact**. A significant impact would occur if the proposed project would exacerbate existing environmental conditions by increasing the potential to expose people or structures to substantial adverse effects related to landslides. The project site and that surrounding area are relatively flat. The site is not adjacent to any slopes or hillsides that could be potentially susceptible to landslides. Therefore, no impact would occur, and no mitigation measures would be required.

[8]City of Long Beach, *Hazards Mitigation Plan*, February 28, 2017.

b) **Less-Than-Significant Impact**. A significant impact would occur if construction activities or future uses of the proposed project would result in substantial soil erosion or loss of topsoil. During ground disturbing activities, such as grading, the project site could potentially be subject to soil erosion or loss of topsoil. However, the proposed project would be required to comply with local, state, and federal regulations and standards related to minimizing potential erosion impacts, including the latest requirements of the City-enforced National Pollution Discharge Elimination System (NPDES) Construction General Permit, best management practices (BMPs), and applicable pollution control and erosion protection measures as stated in Chapter 98.02 of the LBMC. With compliance with these regulations, impacts related to soil erosion would be less than significant, and no mitigation measures would be required.

c) **No Impact**. A significant impact would occur if the proposed project would cause geologic unit or soil on the project site to become unstable or, if the project site is on unstable geologic unit or soil, the proposed project would exacerbate existing conditions so as to increase the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. As discussed in Response to Checklist Questions 3.7a.iii and 3.7a.iv above, the project site is not located within a Liquefaction Potential Area and is not susceptible to landslides due to the flat topography of the project area. The proposed project does not involve activities that would affect seismic conditions or alter underlying soil or groundwater characteristics that govern liquefaction potential.

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The likelihood of lateral spreading to occur on the project site is low due to the relatively flat topography of the project site and the surrounding area Subsidence and ground collapse generally occur in areas with active groundwater withdrawal or petroleum production. The extraction of groundwater or petroleum from sedimentary source rocks can cause the permanent collapse of the pore space previously occupied by the removed fluid. The compaction of subsurface sediments by fluid withdrawal will cause subsidence or ground collapse overlying a pumped reservoir. There are no subsurface oil extraction facilities or groundwater withdrawal activities in the vicinity of the project site. Construction and operation of the proposed project would not involve activities known to cause or trigger subsidence and is not anticipated to adversely affect soil stability or increase the potential for local or regional landslides, subsidence, liquefaction, or collapse. In addition, the proposed project would be constructed in accordance with the CBC and implement the recommendations contained within the site-specific soils engineering report. Therefore, the proposed project would not cause or exacerbate existing conditions associated with subsidence and collapse. Impacts associated with geologic units or soils that are unstable or may become unstable would be less than significant, and no mitigation measures would be required.

d) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would be built on expansive soils without proper site preparation or adequate foundations for proposed buildings, thus posing a hazard to life and property. Expansive soils have relatively high clay mineral content and are usually found in areas where underlying formations contain an abundance of clay minerals. Due to its high clay content, expansive soils expand with the addition of water and shrink when dried, which can cause damage to overlying structures. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors. The proposed project would be required to comply with all

applicable building codes and standards, including the CBC, which is designed to assure safe construction and includes building foundation requirements appropriate to site conditions. The project applicant would also be required to prepare a soils engineering report which would include information regarding the nature, distribution and strength of existing soils, recommendations for grading procedures, design criteria for corrective measures, and other data. Compliance with the CBC and implementation of the recommendations contained within the City-required soils engineering report would ensure that impacts related to expansive soils would be less-than-significant impact, and no mitigation measures would be required.

e) **No Impact**. A significant impact would occur if adequate wastewater disposal were not available to the project site. The project site is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building in an urbanized area of the City, where wastewater infrastructure is currently in place. The proposed project would connect to the existing sanitary sewer system and would not include septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur, and no mitigation measures would be required.

f) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would directly or indirectly destroy a unique paleontological resource or unique geologic feature. Paleontological resources are fossils (e.g., preserved bones, shells, exoskeletons, and other remains) and other traces of former living things. Paleontological resources may be present in fossil-bearing soils and rock formations below the ground surface. Ground-disturbing activities in fossil-bearing soils and rock formations have the potential to damage or destroy paleontological resources that may be present below the ground surface. The project site is located in an urbanized area of the City that has been subject to previous grading and development. No unique geologic features exist on or adjacent to the project site. The proposed project does not involve deep levels of excavation. Ground-disturbing activities would generally take place in previously disturbed soils and are not expected to disturb native soil. However, it is possible that unanticipated paleontological resources may be encountered during ground disturbance, and implementation of Mitigation Measure **GS-1** would be required to reduce the potential for the destruction of a unique paleontological resource in the event of an unanticipated paleontological resource discovery during construction.

MITIGATION MEASURES

GS-1 In the event paleontological resources are encountered during construction, the City shall be immediately informed of the discovery. All work shall cease in the area of the find and a qualified paleontologist shall be retained by the applicant to evaluate the find before restarting work in the area. The City shall require that all paleontological resources identified on the project site be assessed and treated in a manner determined by the qualified paleontologist. The paleontologist shall be empowered to halt or divert ground disturbing activities. A qualified paleontologist is a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist, which is defined as an individual preferably with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California (preferably southern California), and who has worked as a paleontological mitigation project supervisor for a least one year.

Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Any significant paleontological resources found during construction monitoring shall be prepared, identified, analyzed, and permanently curated in an approved regional museum repository under the oversight of the qualified paleontologist. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the project paleontologist. Work in the area of the discovery shall resume once the find is properly documented and the qualified paleontologist authorizes resumption of construction work.

Midtown Specific Plan EIR

Impacts related to Geology and Soils were determined to be less than significant, and no mitigation measures were required for projects within the Midtown Specific Plan area. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

A technical assessment of greenhouse gas (GHG) emissions has been conducted for the proposed project and is included in Appendix B of this IS/MND.

a) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would generate GHG emissions that may have a significant impact on the environment. GHG emissions refer to a group of emissions that are generally believed to affect global climate conditions. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60°F. Without the natural greenhouse effect, the Earth's surface would be about 61°F cooler. In addition to CO_2, CH_4, and N_2O, GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6), black carbon (black carbon is the most strongly light-absorbing component of particulate matter emitted from burning fuels, such as coal, diesel, and biomass), and water vapor.

CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion. The other GHGs are less abundant but have higher global warming potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent of CO_2, denoted as CO_2e. CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

The CEQA Guidelines require lead agencies to adopt GHG thresholds of significance. When adopting these thresholds, the amended Guidelines allow lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence, and/or to develop their own significance threshold. Neither the County nor SCAQMD has officially adopted a quantitative threshold value for determining the significance of GHG emissions that will be generated by projects under CEQA.

SCAQMD published the Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold in October 2008. SCAQMD convened a GHG CEQA Significance Threshold Stakeholder Working Group beginning in April of 2008 to examine alternatives for establishing quantitative GHG thresholds within the district's jurisdiction. The Working Group proposed a tiered screening methodology for assessing the potential significance of GHG emissions generated by CEQA projects. The tiered

screening methodology was outlined in the minutes of the final Working Group meeting on September 28, 2010. For the purposes of this environmental assessment, the interim Tier III screening threshold value of 3,000 metric tons of CO_2e ($MTCO_2e$) per year is the most appropriate comparison value for impacts determination based on the land use elements comprising the proposed project.

GHG emissions that would be generated by the proposed project were estimated using CalEEMod, as recommended by the SCAQMD. CalEEMod quantifies GHG emissions from construction activities and future operation of projects. Sources of GHG emissions during project construction would include heavy-duty off-road diesel equipment and vehicular travel to and from the project site. Sources of GHG emissions during project operation would include employee trips, church visitor trips, student pickup/drop-off trips, high school student drivers, delivery vehicle trips, energy demand, water use, and waste generation.

In accordance with SCAQMD methodology, the total amount of GHG emissions that would be generated by construction of the proposed project was amortized over a 30-year operational period to represent long-term impacts. Construction of the proposed project would generate approximately 294.5 $MTCO_2e$ during Phase 1, 153.2 $MTCO_2e$ during Phase 2, and 148.5 $MTCO_2e$ during Phase 3, for a total of 596.3 $MTCO_2e$. The 30-year amortized construction emissions would be approximately 19.9 $MTCO_2e$ per year.

Table 3-5 shows that combined, amortized construction and operational emissions would result in 512.4 $MTCO_2e$ annually of GHG emissions. Emissions would not exceed the SCAQMD draft interim significance threshold of 3,000 $MTCO_2e$. Therefore, the proposed project would result in a less-than-significant impact related to GHG emissions. Construction and operational emissions would not exceed the SCAQMD draft interim significance threshold. Therefore, GHG emissions would have a less than significant individual and cumulative impact on the environment.

TABLE 3-5: PROPOSED PROJECT ANNUAL GREENHOUSE GAS EMISSIONS

Emissions Source	Annual Emissions ($MTCO_2e$)
Construction Emissions Amortized (Direct)	22.4
Operational Area Source Emissions (Direct)	<0.1
Operational Energy Source Emissions (Indirect)	126.9
Operational Mobile Source Emissions (Direct)	251.5
Operational Waste Disposal Emissions (Indirect)	97.7
Operational Water Distribution Emissions (Indirect)	13.9
TOTAL	**512.4**
SCAQMD Draft Interim Significance Threshold	3,000
Exceed Threshold?	**No**

SOURCE: TAHA, 2022.

b) Less-Than-Significant Impact. A significant impact would occur if the proposed project would conflict with a plan, policy or regulation adopted for the purpose of reducing GHG emissions. The proposed project involves expanding an existing parish school in addition to relocating and constructing a new church, rectory, convent, and gymnasium

near the existing school in order to develop a cohesive parish campus. This type of infill development would not interfere with state, regional, or local plans prepared to reduce GHG emissions.

Assembly Bill 32 requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions and directs CARB to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill sets a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. On December 11, 2008, CARB adopted the Scoping Plan, which sets forth the framework for facilitating the state's goal of reducing GHG emissions to 1990 levels by 2020. The First Update of the Scoping Plan was adopted on May 22, 2014. CARB adopted the 2017 Scoping Plan in November 2017, which details strategies to cut back 40 percent of GHGs by 2030. Assembly Bill 32, the updated first Scoping Plan, and the 2017 Scoping Plan did not establish regulations implementing the Legislature's statewide goals for reducing GHGs for specific projects. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions, including expanding energy efficiency programs, increasing electricity production from renewable resources (at least 33 percent of the statewide electricity mix), and increasing automobile efficiency, implementing the Low-Carbon Fuel Standard, and developing a cap-and-trade program. These measures are designed to be implemented by state agencies. The proposed project would not interfere with implementation of Assembly Bill 32 and measures contained within the Scoping Plan to reduce GHG emissions.

The California legislature enacted Senate Bill 375 in 2008 to set regional targets for the reduction of GHG emissions and to require the preparation of Sustainable Communities Strategies by metropolitan planning organizations. Senate Bill 743 was enacted in 2013 to evolve the assessment of transportation impacts under CEQA, and Senate Bill 43 was incorporated into the CEQA Guidelines in 2018 by promulgating the use of vehicle miles traveled and vehicle miles traveled reductions as a significance threshold metric. The proposed project would generate up to 328 daily vehicle trips. Projects that generate less than 500 daily trips are considered a small project by the City with the presumption of a less-than-significant impact related to vehicle miles traveled.[9] The proposed project would not have the potential to conflict with the regional GHG emissions targets and vehicle miles traveled reduction efforts of Senate Bill 375 and Senate Bill 743, respectively.

The proposed project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in Executive Order S-03-05 and Senate Bill 32, or the carbon neutrality goal for 2045 identified in Executive Order B-55-18. Executive Order S-03-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Senate Bill 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40 percent below 1990 levels by December 31, 2030. Executive Order B-55-18 establishes an additional statewide policy goal to achieve carbon neutrality as soon as possible and no later than 2045 and to achieve and maintain net negative emissions

[9]City of Long Beach, *Traffic Impact Analysis Guidelines*, June 2020.

thereafter. The proposed project would incorporate energy-efficiency, sustainability, and water-efficiency standards required by the LBMC and Title 24 of the Building Code. Therefore, the proposed project would result in a less than significant impact related to conflict with GHG reduction plans, and no mitigation measures would be required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Greenhouse Gas Emissions were determined to be significant an unavoidable.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.9 HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☑	☐	☐
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 **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials, or if it would create a significant hazard through the accidental release of hazardous materials into the environment. Construction of the proposed project would involve the temporary use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. Similarly, operations of the proposed project would involve the limited use and storage of common hazardous substances that are commercially available, such as cleaning supplies, pesticides, herbicides, and other landscaping supplies. The use of common hazardous substances would be similar to those that are typically used during construction activities and for school uses. The proposed project does not involve any industrial uses or activities that would result in the use or discharge of unregulated hazardous materials and/or substances, or create a public hazard through the transport, use, or disposal of hazardous materials. All hazardous materials used during construction and operational activities would be handled in compliance with applicable federal, state, and local standards and regulations. Therefore, impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant, and no mitigation measures would be required.

b) **Less-Than-Significant Impact With Mitigation Incorporated**. A significant impact would occur if the proposed project would create a significant hazard through the accidental release of hazardous materials into the environment. A Phase I Environmental Site Assessment (ESA) was prepared for the project site by Partner Engineering and Science Inc.[10] According to the Phase I ESA, no hazardous substances or petroleum products were observed during the site reconnaissance, and no evidence of current aboveground storage tanks (ASTs) or underground storage tanks (USTs) were observed during the site reconnaissance. However, a monitoring well, associated with an adjacent ARCO station release was noted in the northwest parking lot. Based on the recent groundwater monitoring reports, fuel impacted groundwater caused by the release at the ARCO station is no longer present beneath the project site and does not represent a recognized environmental condition to the project site. Assuming that this well is no longer needed for monitoring at ARCO, the Phase I recommends the abandonment of this monitoring well prior to new construction activities. Therefore, Mitigation Measure **HAZ-1** calls for the abandonment of this well prior to demolition or renovation activities.

Construction of the proposed project would involve the temporary use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. Similarly, operations of the proposed project would involve the limited use and storage of common hazardous substances, such as cleaning supplies, pesticides, and other landscaping supplies. However, all hazardous materials used during construction and operation activities would be handled in compliance with applicable standards and regulations. Due to the age of the buildings to be demolished, some building materials, such as drywall/sheet rock, ceiling tiles, vinyl floor tiles and mastic, as well as the stucco may contain asbestos. It is also likely that some of the painted surfaces may have been painted with lead-based paint. Therefore, there are potentially hazardous materials associated with the existing buildings. To reduce the potential hazardous impacts associated with the demolition and renovation of the existing buildings, Mitigation Measures **HAZ-2** and **HAZ-3** listed below for handling Asbestos-Containing Materials (ACM), and Lead-Containing Materials (LCM) shall be implemented. Adherence to these mitigation measures would reduce impacts to a less than significant level.

c) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The project site is developed with an existing school that will be expanded as part of the proposal. As discussed in Response to Checklist Questions 3.9a and 3.9b, the proposed project would comply with all applicable standards and regulations related to the transport, use, and disposal of hazardous materials during construction and operational activities, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Additionally, operation of the proposed institutional project would not involve the use or transport of large quantities of hazardous materials. Therefore, a less-than-significant impact would occur, and no mitigation measures would be required.

[10] Partner Engineering and Science, Inc., Phase I Environmental Site Assessment, 2500 Pacific Ave., November 20, 2020.

d) **No Impact**. A significant impact would occur if the proposed project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would create a significant hazard to the public or the environment. The California Department of Toxic Substances Control and the State Water Resources Control Board each maintain a database (EnviroStor and GeoTracker, respectively) that provides access to detailed information on hazardous waste sites and their cleanup statuses. EnviroStor focuses on hazardous waste facilities and sites with known contamination or sites with possible reason for further investigation. GeoTracker focuses on sites that impact or have the potential to impact water quality in California, with an emphasis on groundwater. A search of the EnviroStor and Geotracker databases determined that the project site is not included on any list compiled pursuant to Section 65962.5 of the Government Code.[11,12] Therefore, no impact would occur, and no mitigation measures would be required.

e) **No Impact**. A significant impact would occur if the proposed project would be located within an airport land use plan or within two miles of a public airport or public use airport and would result in a safety hazard or excessive noise for people residing or working in the area due to the project site's proximity to a public airport or public use airport. The project site is not located in an airport land use plan area, or within two miles of any public or public use airports, or private air strips. The closest airport to the project site is Long Beach Airport, which is approximately four miles northeast of the project site. The proposed project would not result in an airport related safety hazard for people residing or working in the area. Therefore, no impact would occur, and no mitigation measures would be required.

f) **No Impact**. A significant impact would occur if the proposed project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The I-405 and I-710 are designated disaster routes in the City. Other roadways able to accommodate residents in a large-scale City-wide evacuation include Pacific Coast Highway, 7th Street, Long Beach Boulevard, Cherry Avenue, and Lakewood Boulevard.[13] The proposed project would not impede the use of any disaster routes in the City. In addition, the project plans would be reviewed by the City's Fire Department to ensure that adequate emergency access for emergency vehicles is provided. Therefore, the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur, and mitigation measures would be required.

g) **No Impact**. A significant impact would occur if the proposed project would expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires. The project site is not located within or adjacent to a wildland area in a Very High Fire Hazard Severity zone (VHFHSZ), as identified by the California Department of Forestry and Fire Protection (CalFire). The site is located in an urbanized area of the City surrounded by commercial and residential uses and is adequately served by existing facilities and utilities. No large, undeveloped areas and/or

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[11]Department of Toxic Substances Control, *EnviroStor*, https://www.envirostor.dtsc.ca.gov/public/, accessed February 2022.

[12]Department of Toxic Substances Control, *GeoTracker*, https://geotracker.waterboards.ca.gov/, accessed February 2022.

[13]City of Long Beach, *Hazards Mitigation Plan*, February 28, 2017.

steep slopes that may pose wildfire hazards are located on or near the project site. Additionally, the proposed project would adhere to relevant building design codes, including the City's Fire Code. Therefore, no impact related wildland fires would occur, and no mitigation measures are required.

MITIGATION MEASURES

HAZ -1 Monitoring Well MW12 located in the in the northwest parking lot shall be abandoned prior to demolition or renovation activities assuming that the well is no longer needed for monitoring at ARCO.

HAZ-2 Prior to and demolition or renovation activities, the applicant shall provide a letter from a qualified asbestos abatement consultant that no asbestos-containing materials are present in the buildings. If asbestos-containing materials are found to be present, all asbestos removal operations shall be performed by a California Occupational Safety and Health Administration registered and California-licensed asbestos contractor. All disturbances of asbestos-containing materials, and/or abatement operations, shall be performed under the surveillance of a third-party California Occupational Safety and Health Administration Certified Asbestos Consultant. All disturbances of asbestos-containing materials, and/or abatement operations, shall be performed in accordance with all state and local regulations.

HAZ-3 Any suspect lead-based paint shall be sampled prior to any demolition or renovation activities. Any identified lead-based paint located within buildings scheduled for renovation or demolition shall be abated by a licensed lead-based paint abatement contractor and disposed of accordance with all state and local regulations.

Midtown Specific Plan EIR

Impacts related to Hazards and Hazardous Materials were determined to be less than significant with the implementation of mitigation measures. The mitigation measures included in the Midtown Specific Plan serve the same purpose as the mitigation measures identified above and would not apply to the proposed project. The environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.10 HYDROLOGY AND WATER QUALITY. Would the project:				
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 offsite;	☐	☐	☑	☐
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) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Construction of the proposed project would require demolition, site clearing, grading, utility installation, paving, and building construction activities. During construction, surface water quality could potentially be affected by loose soils, debris, construction wastes, and fuels that could be carried off-site by surface runoff, to local storm drains, which drain into water resources. However, the proposed project would comply with the requirements of the City's National Pollutant Discharge Elimination System (NPDES) permit, and the subsequent requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP), mandated by the California Regional Water Quality Control Board, Los Angeles region (RWQCB). The intent of these regulations is to prohibit non-storm water discharges into the storm drain systems or receiving waters and to require source control and Best Management Practices (BMPs) to prevent or reduce the discharge of pollutants into the storm water to the maximum extent practicable. The proposed project would also be required to comply with the City's Low Impact Development (LID) requirements.[14] LID is a

[14]LBMC, *Chapter 18.74. Low Impact Development Standards*.

stormwater management strategy that emphasizes conservation and the use of existing natural site features integrated with stormwater controls to most closely mimic natural hydrologic patterns. LID controls effectively reduce the amount of impervious area of a completed project site and promote the use of infiltration and other controls that reduce runoff. In addition, the applicant is required to submit a grading plan with hydrology and hydraulic calculations showing building elevations and drainage pattern and slopes, for review and approval by Building and Safety prior to the issuance of a building permit. Compliance with these requirements would reduce potential impacts to local storm water drainage facilities to a less-than-significant level, and no mitigation measures are required.

b) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The proposed project would be served by available water supply and would not significantly deplete groundwater supplies or interfere with groundwater recharge. Approximately half of the City's potable water supplies come from existing Long Beach groundwater supplies, and the other half is purchased from the Metropolitan Water District of Southern California (MWD). The project site is not currently used for groundwater recharge activities. In addition, the proposed project would not install any groundwater wells and would not otherwise directly or indirectly withdraw any groundwater during construction or operations of the proposed project. Therefore, impacts would be less than significant, and no mitigation measures would be required.

c.i) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would substantially alter the existing drainage pattern of the project site, including through the alteration of the course of an existing stream or river or through the addition of impervious surfaces, in a manner that would result in a substantial erosion or siltation on or off-site. During construction, soils on the project site would be temporarily exposed to surface water runoff; however, the proposed project would be required to comply with local, state, and federal regulations and standards related to minimizing potential erosion, including the NPDES and the subsequent requirements of the SUSMP which include BMPs to control sedimentation and erosion. As discussed in Response to Checklist Question 3.10a, above, the City would also review and approve the grading plan, hydrology, and hydraulic calculations prior to grading activities. Compliance with these regulations and requirements would control on- and off-site erosion during construction. During project operations, the proposed project would comply with the City's LID requirements, and use infiltration and other controls that reduce runoff. Therefore, impacts associated with changes to the existing drainage pattern that could result in substantial erosion or siltation would be considered less than significant, and no mitigation measures would be required.

c.ii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would substantially alter the existing drainage pattern of the project site, including through the alteration of the course of an existing stream or river or through the addition of impervious surfaces, in a manner that would substantially increase the rate or amount of surface runoff and would result in flooding on- or off-site. The project site is located within an urbanized area of the City with existing stormwater infrastructure in place. The proposed project would alter the existing drainage patterns on the project site by introducing additional structures and pervious surfaces, but implementation of the

proposed project would not alter the course of a stream or river. Furthermore, the proposed project would implement standard construction BMPs to avoid or minimize temporary adverse effects and comply with the City's LID requirements including using infiltration and other controls that reduce runoff.[15] Therefore, a less-than-significant impact would occur, and no mitigation measures are required.

c.iii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would increase the rate or amount of surface runoff in a manner which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As discussed in Response to Checklist Questions 3.10a through 3.10c.ii above, the proposed project would be required to comply with all federal, state, and local regulations related to water quality standards and wastewater discharge and identify measures that would limit the amount of polluted runoff entering the stormwater drainage system. Additionally, the proposed project would incorporate BMPs and LID requirements to minimize the discharge of pollutants during construction and reduce runoff operations. Compliance with applicable regulations would ensure that the proposed project would not create or contribute runoff water that would exceed the capacity of the City's stormwater drainage system or provide substantial additional sources of polluted runoff. Therefore, a less-than-significant impact would occur, and no mitigation measures are required.

c.iv) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would substantially alter the drainage pattern in a manner that would impede or redirect flood flows. The project site is not located within a 100 year flood hazard zone.[16] As discussed in Response to Checklist Questions 3.10c.i and 3.10c.ii, the proposed project would connect to storm drains and would incorporate City LID requirements to reduce runoff during operations. Stormwater runoff would not increase in a manner that would exceed the capacity of the existing stormwater drainage system within the public rights-of-way. Therefore, the proposed project would not alter the project site's drainage patterns in a manner that would impede or redirect flood flows. A less-than-significant impact would occur, and no mitigation measures are required.

d) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project is in a flood hazard, tsunami, or seiche zone and would risk the release of pollutants due to project inundation. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, or lake. A tsunami is a sea wave produced by a significant undersea disturbance. Mudflows result from the down-slope movement of soil and/or rock under the influence of gravity. As discussed above, the project site is not located within a 100-year flood hazard zone. In addition, the project site is not located near a body of water that is large enough to create a seiche during a seismic event. While the project site is located approximately 4.5 miles from the Pacific Ocean, the site is not within a tsunami inundation area.[17] The project site is located within an urbanized area of the City surrounded by residential and commercial uses. The proposed project would not involve the regular use or storage of large quantities of hazardous materials. While there is little that can be done if the project site is flooded, the risk of releasing pollutants during flooding would be consistent with the existing risks. The proposed project does not involve uses or activities that would exacerbate this risk.

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[15]LBMC, *Chapter 18.74. Low Impact Development Standards*.
[16]City of Long Beach, *Hazards Mitigation Plan*, February 28, 2017.
[17]*Ibid.*

Therefore, a less-than-significant impacts would occur, and no mitigation measures are required.

e) **No Impact**. A significant impact would occur if the proposed project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The Basin Plan for the Coastal Watersheds of Los Angeles and Venture Counties (Basin Plan) establishes water quality standards for ground and surface waters within the Los Angeles region, which includes the City, and is the basis for the Los Angeles Regional Water Quality Control Boards (RWQCB's) regulatory programs. As discussed, Response to Checklist Questions 3.10a through 3.10d above, the proposed project would not substantially degrade water quality, significantly deplete groundwater supplies or interfere with groundwater recharge. Therefore, no impact related to the Basin Plan or sustainable groundwater management plans would occur, and no mitigation measures are required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Hydrology and Water Quality were determined to be less than significant with the implementation of mitigation measures. These mitigation measures would apply to the proposed project and include:

HYD-1 Prior to the issuance of grading or building permits for any development or redevelopment projects pursuant to the Midtown Specific Plan, the City of Long Beach shall ensure that the following drainage improvements are fully funded for and implemented:

- Any development or redevelopment project that would impact existing storm drain facilities within the Midtown Specific Plan area (public and private) that is less than 24-inches in size shall fully fund upsizing of such facilities to a minimum 24-inch pipe size or greater dependent upon the location and size of the development or redevelopment project. The increase in pipe size will serve to reduce localized flooding.
- Any development or redevelopment project that would impact the two segments of City of Long Beach's storm drains in Willow Street for which improvements were recommended by the 2005 Master Plan of Drainage Update shall fully fund upsizing of those storm drain segments to 36 inches or other final size as prescribed by City of Long Beach Public Works Department.

HYD-2 Prior to the issuance of grading or building permits for any development or redevelopment projects pursuant to the Midtown Specific Plan, project applicants/developers of such projects shall prepare a site-specific hydrology and hydraulic study of the onsite and immediate offsite storm drain systems to determine capacity and integrity of the existing systems. The hydrology and hydraulic study shall be submitted to City of Long Beach Public Works Department for review and approval.

HYD-3 The project applicant/developer of each development or redevelopment project that would be accommodated by the Midtown Specific Plan shall request the "allowable discharge rate" – which limits peak flow discharges as compared to existing conditions based on regional flood control constraints – from the Los Angeles County Department of Public Works and shall comply with such discharge rate. Compliance with the "allowable discharge rate" shall be demonstrated in the hydrology and hydraulic study to be completed pursuant to Mitigation Measure **HYD-2**.

HYD-4 The project applicant/developer, architect, and construction contractor for each development or redevelopment project that would be accommodated by the Midtown Specific Plan shall incorporate low-impact development (LID) best management practices (BMPs) within the respective project, providing for water quality treatment and runoff reduction and/or detention in accordance with local stormwater permit requirements.

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

a) **No Impact**. The project site is currently developed with a transitional kindergarten, elementary and middle school. The project site also contains a commercial building located to the northeast of the school across an existing alley. The project site is located in an urbanized area of the City and is surrounded by commercial and residential uses. The proposed project involves the expansion of the school to include instruction for 9th through 12th grades and the addition of church-related facilities. The three phased expansion would include the construction of a parish office, a two-story school building, a single-story gymnasium, a rectory, a convent, and a church. The proposed project also includes a request for a portion of the alley located off of Willow Avenue along the east property line to be vacated. This alley vacation will allow for improved access, additional parking, and to connect the project site to the adjacent parcel that contains an existing commercial building. This will improve overall on-site circulation and connectivity. Access to the project site would be provided by driveway off Pacific Avenue and a driveway located off Willow Street, with primary access taken off of Pacific Avenue. Access to the surrounding uses would not be disrupted, and the proposed project does not include any features that would physically divide or block access to or through the community. No street closures would result with implementation of the proposed project, and the project does not include any new roads or infrastructure that has the potential to divide the community. Therefore, no impact would occur, and no mitigation measures are required.

b) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project conflicts with applicable land use plans, policies, or regulations in a manner that would result in a significant environmental impact. The project site is located partially in the Institutional Zone (I) and partially in the Specific Plan 1–TN Transit Node (SP-1-TN) zone and has a General Plan Land Use Designation of Neighborhood Serving Center or Corridor Low Density (NSC-L)/Transit Oriented Development Low Density (TOD-L). As previously discussed, the project site is currently developed with a transitional kindergarten, elementary and middle school. The project site also contains a commercial building located to the east of the school across an existing alley. The proposed project involves the expansion of the school to include instruction for 9th through 12th grades and addition of church-related facilities. The three phased expansion would include the construction of a parish office, a two-story school building, a single-story gymnasium, a rectory, a convent, and a church. The proposed project also includes a request for a portion of the alley located off of Willow Avenue along the east property line to be vacated to allow for improved access, additional parking, and to connect the project site to the adjacent parcel that contains an existing commercial office building in order to improve overall on-site circulation and connectivity.

The proposed project would require approval of the following discretionary actions:

- Vesting Tentative Parcel Map – Required to merge the existing lots into one lot to accommodate the proposed development. The proposed project includes a request for an 18-foot x 110-foot portion of the alley located off Willow Avenue along the east property line to be vacated as part of the Tentative Parcel Map.
- Long Range Development Plan – Required for lots exceeding 40,000 square feet.
- Site Plan Review – Required for nonresidential development in SP-1 with 1,000 square feet or more of new building area, for projects in the Institutional Zone, and required in conjunction to a Long Range Development Plan. Such plan shall be submitted to the Planning Commission for approval through the site plan review procedure.
- Sign Program – Required for any new commercial, industrial, or institutional building(s).

Upon approval of the requested discretionary actions by the City, the proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation and a less-than-significant impact would occur.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Land Use and Planning were determined to be less than significant with implementation of mitigation measures. However, the mitigation measure included in the Midtown Specific Plan EIR pertains to updates to the City's General Plan and would not apply to the proposed project. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

a-b) **No Impact**. A significant impact would occur if the proposed project would result in the loss of availability of known mineral resources of regional value and residents of the state or result in the loss of a locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan. The project site is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building. The project site and surrounding properties are located in an urbanized area of the City. Although oil deposits are abundant in the City, no oil extraction occurs on or adjacent to the project site. Additionally, no quarry activities have historically occurred on or are presently conducted in the vicinity of the proposed project. The proposed project would not result in the loss of availability of any known regionally valuable or locally important mineral resource. Therefore, no impact related to mineral resources would occur, and no mitigation measures are required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Mineral Resources were identified, and no mitigation measures were required for projects. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.13 NOISE. Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☑	☐	☐
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☑	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

A technical noise and vibration assessment has been conducted for the proposed project and is included in Appendix C of this IS/MND.

a) **Less-Than-Significant Impact with Mitigation Incorporated**. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch). The standard unit of measurement for sound is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The A-weighted scale, abbreviated dBA, reflects the normal hearing sensitivity range of the human ear.

Noise is generally defined as unwanted sound. The degree to which noise can impact the human environment ranges from levels that interfere with speech and sleep (annoyance and nuisance) to levels that cause adverse health effects (hearing loss and psychological effects). Human response to noise is subjective and can vary greatly from person to person. Factors that influence individual response include the intensity, frequency, and pattern of noise, the amount of background noise present before the intruding noise, and the nature of work or human activity that is exposed to the noise source.

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and a 10-dBA increase is subjectively heard as a doubling in loudness. Noise levels decrease as the distance from the noise source to the receiver increases. Noise levels generated by a stationary noise source, or “point source,” will decrease by approximately 6 dBA over hard surfaces (e.g., pavement) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet over hard surface from the noise source, 77 dBA at a distance of 200 feet, and so on. Noise levels generated by a mobile source will decrease by approximately 3 dBA over hard surfaces for each doubling of the distance.

The noise analysis discusses sound levels in terms of Equivalent Noise Level (L_{eq}), L50 and Community Noise Equivalent Level (CNEL). L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for one hour is the energy average

noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. L50, is the noise level for 30 minutes within any hour. The L_{eq} and L50 are expressed in units of dBA.

CNEL is an average sound level during a 24-hour period. CNEL is a noise measurement scale, which accounts for noise source, distance, single event duration, single event occurrence, frequency, and time of day. Human reaction to sound between 7:00 pm and 10:00 pm is as if the sound were 5 dBA higher than if it occurred from 7:00 am to 7:00 pm. From 10:00 pm to 7:00 am, humans perceive sound as if it were 10 dBA higher due to the lower background level. Hence, the CNEL is obtained by adding an additional 5 dBA to sound levels in the evening from 7:00 pm to 10:00 pm and 10 dBA to sound levels in the night from 10:00 pm to 7:00 am. Because CNEL accounts for human sensitivity to sound, the CNEL is always a higher number than the actual 24-hour average.

Summary of Applicable Noise Regulations/Standards

The City of Long Beach has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. Chapter 8.80 of the LBMC sets forth all noise regulations controlling unnecessary, excessive, and annoying noise and vibration in the City. The LBMC has not established a quantitative standard for construction noise, which is instead regulated by allowable hours of construction. LBMC Section 8.80.202 (Construction Activity – Noise Regulations) states that no construction or repair work shall be performed between the hours of 7:00 pm and 7:00 am on Monday through Friday and federal holidays occurring on weekdays, since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment, or other place of residence. Further, no person shall operate or permit the operation of any tools or equipment which produce loud or unusual noise between the hours of 7:00 pm on Friday and 9:00 am on Saturday and after 6:00 pm on Saturday. No person shall conduct construction work on Sunday. A Sunday work permit may be issued by the Noise Control Officer, but only for the hours between 9:00 am and 6:00 pm.

Section 8.80.150 of the LBMC states that exterior noise standards are based on various land use districts and are presented in Section 8.80.160. The proposed project and its immediate surrounding area are located in Noise District One. **Table 3-6** summarizes the applicable standards for Noise District One. LBMC Section 8.80.160 (C) states that if the measured ambient noise level exceeds the permissible noise limit categories, then the allowable noise exposure standard shall be increased by increments of 5 dB. **Table 3-7** summarizes the LBMC interior noise standards for various land use districts and types.

TABLE 3-6: CITY OF LONG BEACH INTERIOR NOISE LIMITS

Receiving Land Use District	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
All	Residential	10:00 p.m. to 7:00 a.m. 7:00 a.m. to 10:00 p.m.	35 45
All	School	7:00 a.m. to 10:00 p.m. (While school is in session)	45
Hospital, designated quiet zones and noise sensitive zones	Quiet Zones	Any time	40

SOURCE: LBMC, *Section 8.80.170 Interior Noise Limits – Maximum Sound Levels*.

TABLE 3-7: CITY OF LONG BEACH EXTERIOR NOISE LIMITS (DISTRICT ONE)

Allowable Noise Exposure Duration	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
30 Minutes (L_{50})	50 dBA	45 dBA
15 Minutes	55 dBA	50 dBA
5 Minutes	60 dBA	55 dBA
1 Minute	65 dBA	60 dBA
Any period of time	70 dBA	65 dBA

SOURCE: LBMC, *Section 8.80.160 Exterior Noise Limits – Correction for Character of Sound*.

LBMC Section 8.20.200 (N) (Noise Disturbances – Acts Specific) states that air-conditioning or refrigerating equipment shall not exceed 55 dBA at the nearest property line, 50 dBA at a neighboring patio, or 50 dBA outside the neighboring living area window nearest the equipment location.

LBMC Section 8.80.340 (A) (Variance – Exemption from regulations.) states that a variance may be obtained from a noise control officer to grant an exemption from any provision of Chapter 8.80 of the LBMC.

The City of Long Beach also includes noise regulations within the Noise Element of the General Plan. The Noise Element, adopted in 1975, serves as a comprehensive program for noise control and abatement in Long Beach and includes an action program consisting of various measures that the City may implement in pursuing its noise control plan.

Existing Noise Levels

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. Sensitive receptors within 500 feet of the project site include:

- Residences along Pine Avenue to the east, located approximately 20 feet away from the project site.
- Iglesia Universal, a church located approximately 50 feet away from the project site.
- Residences along West 25th Street to the southeast, located approximately 60 feet away from the project site.
- Child Lane Preschool to the west, located approximately 100 feet away from the project site.
- Razalan Lee Medical Group to the west, located approximately 100 feet away from the project site.
- The James S. Benedict Child Development Center Preschool to the west, located approximately 100 feet away from the project site.
- Pacific Burnett Clinic to the southwest, located approximately 120 feet away from the project site.
- Residences along Pacific Avenue to the southwest, located approximately 190 feet away from the project site.
- Residences along East 25th Street to the southeast, located approximately 210 feet away from the project site.

- Residences along Earl Avenue to the east, located approximately 180 feet away from the project site.
- Residences along Cedar Avenue to the west, located approximately 230 feet away from the project site.
- Pacifica Motel to the west, located approximately 235 feet away from the project site.
- Panacea Health Care Clinic to the north, located approximately 255 feet away from the project site.
- The Cove Hotel, Ascend Hotel Collection to the east, located approximately 340 feet away from the project site.
- Young Horizons Preschool Ludloff Center Preschool to the north, located approximately 380 feet away from the project site.
- Residences along East Vernon Street to the east, located approximately 470 feet away from the project site.
- Young Horizons North Pacific Center Preschool to the south, located approximately 515 feet away from the project site.
- Pacific Medical Center to the north, located approximately 495 feet away from the project site.

To characterize the existing noise environment around the project site, short-term noise measurements were taken using a SoundPro DL Sound Level Meter on Tuesday, November 30th, 2021, between 11:30 am and 2:30 pm. Short-term noise levels range from 57.3 to 72.1 dBA L_{eq}. Existing noise levels at the noise monitoring locations are shown in **Table 3-8**.

TABLE 3-8: EXISTING AMBIENT NOISE LEVELS (SHORT TERM MEASUREMENT)

Noise Monitoring Location	Sound Level (dBA, L_{eq})
Residences (2677 Cedar Ave.)	62.8
Pacifica Motel (228 Willow St.)	72.1
Holy Innocents School along Pacific Ave.	69.8
Alleyway between the Holy Innocents School and Pine Ave.	57.1
Residences (2533 Pine Ave.)	57.3
Residences (2442 Pine Ave.)	61.1

Noise monitoring information can be found in Appendix B.
SOURCE: TAHA, 2022.

Construction Noise Levels

Construction for the Proposed Project will occur over three phases. The first phase will begin in August 2023 and be completed in August 2024, the second phase will start in September 2024 and be completed by May 2025, the third and last phase would begin in December 2025 and be completed in April 2027. In each phase of construction, demolition of existing buildings and re-construction of new buildings will occur. The impact analysis is predicted on the location of noise-sensitive land used and the existing setting. The sensitive receptors analyzed as part of this impact analysis would remain the same for each phase and the analysis has been completed for the project as a whole.

Construction activity would result in temporary increases in ambient noise levels in the area surrounding the project site on an intermittent basis. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise

source and receptor, and presence or absence of noise attenuation barriers. Typical noise levels from various types of equipment that may be used during each construction phase are shown in **Table 3-9**. Due to the small size of the project site, it is anticipated that only one or two pieces of equipment would be operated at a time. The combined noise levels shown in **Table 3-9** consider the likelihood that up to two of the loudest pieces of construction equipment in that phase would be operating simultaneously. Noise levels would typically range from 73.7 to 82.0 dBA L_{eq} for each phase. When considered as an entire process with multiple pieces of equipment, demolition would generate the loudest noise level at approximately 82.0 dBA L_{eq} at 50 feet.

TABLE 3-9: CONSTRUCTION EQUIPMENT NOISE LEVEL RANGES

Construction Equipment	Noise Level at 50 feet (dBA, L_{eq})
DEMOLITION	
Concrete Saw	82.6
Backhoe	73.6
Dozer	77.7
Demolition Combined	**82.0**
SITE PREPARATION	
Grader	81.0
Backhoe	73.6
Dozer	77.7
Site Preparation Combined	**83.2**
GRADING	
Grader	81.0
Backhoe	73.6
Dozer	77.7
Grading Combined	**81.0**
BUILDING CONSTRUCTION	
Crane	72.6
Generator	77.6
Gradall	79.4
Backhoe	73.6
Welder	70.0
Concrete Mixer	74.8
Building Construction Combined	**81.6**
PAVING	
Concrete Mixer	74.8
Paver	74.2
Roller	73.0
Backhoe	73.6
Paving Combined	**80.0**
ARCHITECTURAL COATING	
Air Compressor	73.7
Architectural Coating Combined	**73.7**

SOURCE: Federal Highway Administration, *Roadway Construction Noise Model, Version 1.1*, 2008.

Construction activities would occur Monday through Friday, and workers would typically be onsite from 7:00 am to 5:00 pm. Construction on Saturdays from 8:00 am to 4:00 pm would occur as needed through key milestones throughout the project. The LBMC has not established a quantitative standard for construction noise specifically, which is instead regulated by allowable hours of construction set forth in LBMC Section 8.80.202. Construction activity would therefore comply with the allowable hours of construction in the LBMC, which are 7:00 am to 7:00 pm Monday through Friday, 9:00 am to 6:00 pm on Saturday, and no construction activity on Sundays.

For informational purposes construction noise has been assessed at offsite uses and are shown in **Table 3-10**. The nearest offsite uses and sensitive receptors are residences along Pine Avenue located approximately 20 feet east from the project site across an existing alleyway. Due to the small size of the project site, it is anticipated that only one or two pieces of equipment would be operated at a time. Demolition activity would likely be the loudest phase of construction, which would utilize a concrete saw, backhoe, and a dozer. The majority of the latter phases of construction would occur within the newly constructed building, and result in lower noise levels than exterior construction.

TABLE 3-10: UNMITIGATED CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptors	Distance to Construction (Feet)	Intervening Building /a/	Max Construction Noise Level (dBA, L_{eq})	City of Long Beach Exterior Noise Standard
Residences along Pine Ave. to the east	20	0	90.0	60.0
Iglesia Universal Church to the south	50	0	82.0	70.0
Residences along W. 25th Street to the southeast	60	0	80.4	60.0
Child Lane Preschool to the west	100	0	76.0	70.0
Razalan Lee Medical Group to the west	100	0	76.0	70.0
The James S. Benedict Child Development Center Preschool to the west	100	0	76.0	70.0
Pacific Burnett Clinic to the southwest	120	0	74.4	70.0
Residences to the southwest and to the southeast	190	0	70.4	70.0
Residences to the east approximately 200 feet away	180	4.5	66.4	60.0
Residences along Cedar Ave. to the west	230	4.5	64.2	60.0
Pacifica Motel to the west	235	4.5	64.1	75.0
Panacea Health Care Clinic to the north	255	4.5	63.3	70.0
The Cove Hotel, Ascend Hotel Collection to the east	340	4.5	60.8	75.0
Young Horizons Lufloff Center Preschool to the north	380	7.5	56.9	70.0
Residences along E. Vernon St. to the east	470	7.5	55.0	60.0
Young Horizons N. Pacific Center Preschool to the south	515	7.5	54.2	70.0
Pacific Medical Center to the north	495	10.5	51.6	70.0

Noise level calculations can be found in Appendix B.
SOURCE: TAHA, 2022.

Construction of the proposed project would not result in a violation of the construction noise regulations set forth by LBMC Section 8.80.2020 which establishes allowable hours of construction in the City. Nonetheless, to reduce construction noise levels at nearby sensitive receptors the proposed project would implement Mitigation Measures **N-1** through **N-6**, which are standard best management practices to control noise at offsite uses. These include installing temporary barriers around eastern property line project site to help control noise at adjacent sensitive receptors (Mitigation Measure **N-1**),

requiring the construction contractor to use engine mufflers consistent with manufacturers' standards (Mitigation Measure **N-2**), requiring all equipment to be properly maintained to assure that no additional noise due to worn or improperly maintained parts would be generated at the project site (Mitigation Measure **N-2**). Although Mitigation Measures **N-3** through **N-6** are not quantifiable, they would still provide noise control by locating equipment staging areas away from sensitive receptors, limiting equipment idling noise, and establishing a noise disturbance coordinator.

Table 3-11 shows noise levels at sensitive receptors after the utilization of mufflers and the installation of temporary noise barriers. Although construction noise levels would be higher than the City of Long Beach Exterior Noise Standards at nearby residences along Pine Avenue and West 25th Street, these standards are only provided as a point of reference for construction noise levels. Construction activity would comply with the allowable hours of construction set forth in LBMC Section 8.80.202 which is how the City regulates construction noise. Additionally, construction noise would be temporary and intermittent and noise levels could be lower than expected. Therefore, the proposed project would result in a less-than-significant impact with mitigation incorporated related to on-site construction noise.

TABLE 3-11: MITIGATED CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptors	Distance (feet)	Mitigation Measure /a/	Mitigated Noise Level	Max Construction Noise Level (dBA, L_{eq})	City of Long Beach Exterior Noise Standard
Residences along Pine Ave. to the east	20	N-1, N-2	67.0	75.0	60.0
Iglesia Universal Church to the south	50	N-2	77.0	77.0	70.0
Residences along W. 25th St. to the southeast	60	N-2	77.0	75.4	60.0
Child Lane Preschool to the west	100	N-2	77.0	71.0	70.0
Razalan Lee Medical Group to the west	100	N-2	77.0	71.0	70.0
The James S. Benedict Child Development Center Preschool to the west	100	N-2	77.0	71.0	70.0
Pacific Burnett Clinic to the southwest	120	N-2	77.0	69.4	70.0
Residences to the southwest and to the southeast	190	N-2	77.0	65.4	70.0
Residences to the east approximately 200 feet away	180	N-2	77.0	61.4	60.0
Residences along Cedar Ave. to the west	230	N-2	77.0	59.2	60.0
Pacifica Motel to the west	235	N-2	77.0	59.1	75.0
Panacea Health Care Clinic to the north	255	N-2	77.0	58.3	70.0
The Cove Hotel, Ascend Hotel Collection to the east	340	N-2	77.0	55.8	75.0
Young Horizons Lufloff Center Preschool to the north	380	N-2	77.0	51.9	70.0
Residences along E. Vernon St. to the east	470	N-2	77.0	50.0	60.0
Young Horizons N. Pacific Center Preschool to the south	515	N-2	77.0	49.2	70.0
Pacific Medical Center to the north	495	N-2	77.0	46.6	70.0

/a/ Includes a 10 dB reduction for a temporary noise barrier (Mitigation Measure **N-1**) and a 5 dB reduction for equipment mufflers (Mitigation Measure **N-2**)
SOURCE: TAHA, 2022

Operations

On-Site Stationary Noise Sources. Operational stationary noise was assessed for operation of the proposed project and would include noise typically associated with school and church operations. Operational stationary sources of noise would include mechanical equipment such as heating, ventilation, and air conditioning (HVAC) noise. Existing noise sources would remain, such as noise from students playing on the field, parking activity noise, and school and church bells. Therefore, these sources of noise would not result in an incremental increase in noise. General conversational noise would mostly occur within the structures of the school, gymnasium and church and would not be audible at off-site uses.

HVAC equipment noise would not exceed exterior noise standards at any nearby sensitive receptors. HVAC equipment would be located on the ground, next to the proposed structures. The distance between the HVAC system and the closest sensitive receptors is approximately 30 feet. **Table 3-12** indicates the HVAC equipment noise levels at the five nearest sensitive receptors adjacent to the proposed project. HVAC equipment would generate a noise level of 50.0 dBA L_{eq} at 50 feet. At the nearest sensitive receptor located approximately 30 feet away, HVAC noise levels would approximately be 54.4 dBA L_{eq} and would not exceed the 55.0 dBA threshold for HVAC equipment noise measured at the property line, set forth in LBMC Section 8.20.200. Therefore, the proposed project would result in a less-than-significant impact related to HVAC equipment noise.

TABLE 3-12: OPERATIONAL NOISE - HVAC EQUIPMENT NOISE LEVEL

Sensitive Receptors	Distance (feet) /a/	Reference Noise Level (dBA)	HVAC Equipment Noise Level (dBA, L_{eq})	Threshold	Exceed Threshold?
Residences along Pine Ave. to the east	30	50.0	54.4	55.0	No
Iglesia Universal Church to the east	60	50.0	48.4	55.0	No
Residences along W. 25th St. to the southeast	80	50.0	45.9	55.0	No
Child Lane Preschool to the west	105	50.0	43.6	55.0	No
Razalan Lee Medical Group to the west	105	50.0	43.6	55.0	No
James S. Benedict Child Development Center to the west	105	50.0	43.6	55.0	No

/a/ Distance is measured from approximate location of HVAC equipment to the sensitive receptor.
SOURCE: TAHA, 2022; Daikin Air Intelligence, Base Efficient Air Conditioner Packaged Rooftop Unit DBC Commercial 7.5 – 12.5 Nominal Tons, available at https://budgetheating.com/v/vspfiles/downloadables/DBC%20Series%207.5-12.5%20Tons%20Technical%20Specifications.pdf.

The proposed project includes a grand total of 93 parking spaces. Sources of noise would include engines accelerating, doors slamming, car alarms, and people talking. It is anticipated that vehicle speeds on the project site would not exceed 10 miles per hour. **Table 3-13** includes an analysis of parking noise at sensitive receptors most likely to be affected.

TABLE 3-13: OPERATIONAL NOISE - PARKING ACTIVITY NOISE LEVEL

Sensitive Receptors	Distance (feet) /a/	Reference Noise Level (dBA)	Parking Activity Noise Level (dBA, L_{eq})	Interior Parking Activity Noise Level (dBA, L_{eq}) /b/	Exterior Threshold (dBA)	Interior Threshold (dBA)	Exceed Threshold?
Residences along Pine Ave. to the east	90	56.4	51.3	26.3	60.0	45.0	No
Razalan Lee Medical Group to the west	170	56.4	45.8	20.8	70.0	45.0	No
Child Lane Preschool to the west	180	56.4	45.3	20.3	70.0	45.0	No
James S. Benedict Child Development Center to the west	200	56.4	44.4	19.4	70.0	45.0	No
Iglesia Universal Church to the east	220	56.4	43.5	18.5	70.0	45.0	No
Residences along W. 25th St. to the southeast	220	56.4	43.5	18.5	60.0	45.0	No

/a/ Distance of the center of parking lot to property line of sensitive receptor.
/b/ A 20 dB exterior to interior noise reduction has been applied.
SOURCE: TAHA, 2022, FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

Parking activity noise was calculated based upon a reference noise level of 56.4 dBA L_{eq} at 50 feet for a 1,000-parking space parking garage.[18] The noise level was adjusted using guidance provided by the Federal Transit Administration Transit Noise and Vibration Impact Assessment guidance and a maximum volume of 45 trips per hour, as estimated based on the number of new dedicated parking spaces for the project. The resultant noise level of parking activity at a distance of 90 feet at the nearest sensitive receptor would approximately be 51.3 dBA L_{eq}, which would be lower than the existing noise level of 51.6 dBA L_{eq} and the daytime exterior noise standard of 60 dBA. According to FHWA guidance, single-glazed windows provide approximately 25 dB of exterior to interior noise reduction.[19] Interior noise levels at the nearest sensitive receptor would be approximately 26.3 dBA, L_{eq} and would not exceed the 45 dBA daytime interior noise standard. Furthermore, project noise levels would be similar to the noise levels generated by the existing parking lot.

Operational noise related to HVAC and parking activity would not exceed LBMC exterior noise standards. Therefore, the proposed project would result in a less-than-significant impact related to operational noise.

Mobile Noise Source

The proposed project would generate approximately 328 net new daily vehicle trips, including 72 AM peak hour trips and 57 PM peak hour trips.[20] Operational mobile noise was assessed using the FHWA Traffic Noise Model Version 3.1 (TNM 3.1). Mobile noise

[18] FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.
[19] FHWA, *Highway Traffic Noise Analysis and Abatement Guidance*, *Table 6: Building Noise Reduction Factors*, December 2011.
[20] Iteris, *2500 Pacific* (*Holy Innocents) Project Traffic and Parking Study*, 2022.

levels were modeled for each of the three scenarios: for Existing (2022) conditions, Future No Project (2027) conditions and Future Plus Project (2027) conditions. Existing noise levels measured at nearby sensitive receptors are in the range of approximately 59.5 dBA L_{eq} to 70.8 dBA, L_{eq}.

Table 3-14 illustrates modeled mobile noise levels for the above traffic scenarios. Predicted noise levels calculated using traffic volumes for the Existing (2022) scenario are similar to the measured existing noise levels.

TABLE 3-14: ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL – BASELINE PLUS PROJECT

Roadway Segment	Estimated dBA, CNEL		
	Existing (2022)	Future No Project (2027)	Future Plus Project (2027)
Pine Ave. from W.25th to Willow St.	60.9	61.1	61.2
W. 25th between Pine Ave. and Pacific Ave.	59.5	59.7	59.8
Pacific Ave. between Willow St. and W. 25th St.	68.8	68.9	69.0
Willow St. between Pine Ave. and Pacific Ave.	70.8	71.0	71.1

SOURCE: TAHA, 2022

Table 3-15 provides a comparison of the incremental change in noise levels between various traffic scenarios. The maximum mobile source noise level increase between the Existing (2022) condition and the Future Plus Project (2027) conditions would be 0.3 dBA, L_{eq}. The maximum mobile source noise level increase between the Future (2027) No Project scenario and the Future Plus Project (2027) scenario would be 0.13 dBA, L_{eq}. This demonstrates that the majority of mobile source noise level increase would be a result of future growth of traffic volumes not related to the proposed project. CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 dBA or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard. Where noise levels would remain at or below the normally acceptable noise level standard with the project, noise level increases of 5 dBA or greater would be considered significant. Therefore, the proposed project would result in a less-than-significant impact to sensitive receptors as related to mobile source noise.

TABLE 3-15: MOBILE NOISE LEVELS COMPARISON

Roadway Segment	Noise Levels (dBA, L_{eq})	
	Incremental Increase from Existing (2022) to Future (2027) Plus Project	Incremental Increase from Future No Project to Future (2027) Plus Project
Pine Ave. from W.25th to Willow St.	0.3	0.0
W. 25th between Pine Ave. and Pacific Ave.	0.3	0.1
Pacific Ave. between Willow St. and W. 25th St.	0.2	0.1
Willow St. between Pine Ave. and Pacific Ave.	0.2	0.0

SOURCE: TAHA, 2022.

b) Less-Than-Significant Impact. Construction activity can generate varying degrees of vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to damage at the highest levels.

Construction

Because construction activity is short-term and equipment moves around a project site, the primary concern regarding construction vibration relates to building damage. Activities that can result in damage include demolition and site preparation in close proximity to sensitive structures. Typical vibration levels associated with relevant construction equipment are provided in **Table 3-16**. Importantly, construction of the proposed project would not require pile driving. Equipment used during construction would be most similar to a large bulldozer, which generates a vibration level of 0.089 inches per second at 25 feet.

TABLE 3-16: VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Vibration Level at 25 feet (Inches/Second)
Large Bulldozer	0.089
Excavator	0.040
Small Bulldozer	0.003

SOURCE: FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

Equipment that would be utilized would be most similar to a small bulldozer, which generates a PPV of 0.003 inches per second at 25 feet. The equipment with the largest potential for vibration impacts would be an excavator, which generates a PPV of 0.040 inches per second at 25 feet. The nearest sensitive receptors would be located approximately 20 feet away from construction activity when equipment would be located on the property line of the proposed project site, as shown in **Table 3-17**.

TABLE 3-17: VIBRATION ASSESSMENT PER PIECE OF CONSTRUCTION EQUIPMENT

Sensitive Receptor	Distance (feet)	PPV at Structure (inches/second)
VIBRATION ASSESSMENT (SMALL BULLDOZER)		
Residences along Pine Ave. to the east	20	0.004
Iglesia Universal Church to the south	50	0.001
VIBRATION ASSESSMENT (EXCAVATOR)		
Residences along Pine Ave. to the east	20	0.056
Iglesia Universal Church to the south	50	0.014

SOURCE: TAHA, 2022.

Vibration levels decreases rapidly with distance. Vibration levels at the nearest sensitive receptors would occur at a maximum of 0.056 PPV inches per second, which would be below the 0.2 inches per second vibration damage criterion (PPV) set by the FTA. Therefore, the proposed project would result in a less-than-significant impact related to on-site construction vibration.

Operations

The proposed project would not include significant sources of vibration. Vehicle trips associated with the proposed project would not generate perceptible levels of vibration as rubber-tired vehicles rarely create ground-borne vibration problems unless there is a discontinuity or bump in the road that causes the vibration. Therefore, the proposed project would result in a less-than-significant impact related to operational vibration.

c) **No Impact**. The proposed project is located outside of the 60 dB CNEL contours of the Long Beach Airport and would not expose people residing or working in the project area to excessive noise levels.[21] Therefore, no impact related to airport or airstrip noise would occur.

MITIGATION MEASURES

N-1 The construction contractor shall ensure that barriers, such as, but not limited to, plywood structures or flexible sound control curtains extending a minimum of eight feet in height shall be erected along boundary of the Project site adjacent to residences along Pine Avenue to minimize the amount of noise during construction on the nearby noise-sensitive uses located offsite. Noise barriers shall be capable of reducing construction noise levels by 10 dB.

N-2 The construction contractor shall ensure that power construction equipment (including combustion or electric engines), fixed or mobile, shall be equipped with noise shielding and muffling devices (consistent with manufacturers' standards) during the entirety of construction of the proposed project. The combination of muffling devices and noise shielding shall be capable of reducing noise by at least 5 dBA from non-muffled and shielded noise levels. Prior to initiation of construction the contractor shall demonstrate to the city that equipment is properly muffled, shielded and maintained. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.

N-3 Rubber-tired equipment shall be used rather than tracked equipment when feasible.

N-4 Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.

N-5 A public liaison shall be appointed for project construction and be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern.

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[21]Long Beach Airport, *Year 2004 CNEL Contours*, available at http://www.longbeach.gov/globalassets/lgb/community-information/noise-abatement/eir-noise-contour, 2005.

N-6 The public shall be notified in advance of the location and dates of construction hours and activities.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Noise were determined to remain significant and unavoidable despite the implementation of mitigation measures. The mitigation measures included in the Midtown Specific Plan are generally the same and serve the same purpose as the mitigation measures identified above. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

a) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would induce substantial population growth that would not have otherwise occurred as rapidly or in as great a magnitude. The proposed project consists of the expansion of an existing school and the addition of church-related facilities. Currently, the school only offers education for grades TK – 8th. The new school building to be constructed in Phase 1 would enable the school to include instruction for 9th through 12th grades. There would be 22-23 students in each grade level. The student body and respective staff would be made up of roughly 315 students, 16 teachers, six aides, two facility staff, one main office secretary and one business office staff. Phase 3 of the proposed project includes the construction of a rectory and convent on-site. The rectory and convent would house the parish Pastor and The Carmelite Sisters of the Most Sacred Heart. The existing convent houses seven people, and the proposed new convent and rectory would house eight people. While the proposed project includes some limited housing, employees and students are not expected to relocate to the surrounding area. The proposed project would not result in a substantial permanent increase in population. In addition, the project site is served by and would connect to existing water and sewer facilities, gas and electric utilities, and roadways. The proposed project would not extend any roads or other infrastructure. Therefore, impacts related to unplanned population growth would be less than significant, and no mitigation measures would be required.

b) **No Impact**. A significant impact would occur if the proposed project would displace substantial numbers of existing people or housing. The project site is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building. No housing units are located on the project site, and the proposed project would not displace any people or housing. As a result, the proposed project would not necessitate the construction of replacement housing elsewhere. Therefore, no impacts to housing displacement would occur, and no mitigation measures would be required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Population and Housing were determined to be less than significant, and no mitigation measures were required. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

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

a.i) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would result in the provision of or need for new or physically altered fire protection services, the construction and/or operation of which would cause significant environmental impacts in order to maintain service ratios, response times, or other performance objectives. The Long Beach Fire Department (LBFD) provides fire protection services to the project site. The nearest LBFD fire station to the project site is Station 9 located at 2295 Elm Avenue, approximately one mile southeast of the project site. Fire access to the project site is available on the west side of the property along Pacific Avenue, from the east side of the property from the alley, along the south property line from 25th Street, and from the north side of the property along Willow Street. Fire access is also available to the west from Pine Street. The LBFD has reviewed the site plan and confirmed that the fire access right-of-away provides adequate fire hose pull access, and there would be no need for the fire apparatus to maneuver on site. Fire sprinklers would also be installed in the according to City standards, and the proposed project is not expected to generate substantial increase in demand for fire protection services or result in an increase in LBFD call volumes, responses, and response times. In addition, the City collects fire facility impact fees from all new developments to pay for acquisition of new stations and equipment, pursuant to LBMC Chapter 18.23. Therefore, impacts related to fire protection would be less than significant, and no mitigation would be required.

a.ii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would result in the provision of or need for new or physically altered police protection services, the construction and/or operation of which would cause significant environmental impacts in order to maintain service ratios, response times, or other performance objectives. The Long Beach Police Department (LBPD) serves the project site. The nearest LBPD police station to the project site is the West Division located at 1835 Santa Fe Avenue, approximately two miles southeast of the project site. The proposed project is not expected to generate substantial increase in demand for police protection services or result in an increase in LBPD call volumes, responses, and

response times. In addition, development projects in the City are charged a Police Facilities Impact Fee to pay for acquisition of new stations and equipment, Therefore, impacts related to police protection would be less than significant, and no mitigation would be required.

a.iii) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would induce substantial employment or population growth, which could increase demand for school facilities that would exceed the capacity of the school, necessitating a new school or physical alteration of an existing school, the construction of which would cause a significant environmental impact. The proposed project involves the expansion of an existing school to include instruction for 9th through 12th grades and the addition of church-related facilities. The existing school currently serves Transitional Kindergarten to 8th grade students. There would be 22-23 students in each grade level, and the student body would be made up of roughly 315 students, 16 teachers, six aids, two facility staff, one main office secretary and one business office staff. In addition, the rectory and convent would house the parish Pastor and The Carmelite Sisters of the Most Sacred Heart. Nonetheless, the increase in the number of students and employees on the project site would not affect demand for schools. Therefore, no impact would occur, and no mitigation would be required.

a.iv) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would induce substantial population growth resulting in the need for and/or the provision of new or physically altered parks, the construction of which would cause significant environmental impacts. Long Beach Parks, Recreation, and Marine operate and maintain 169 parks in the City. The demand for parks is generated by the populations in the parks' service areas. The proposed project consists of the expansion of an existing school and the addition of church-related facilities and wound increase employment on the project site. Although it is possible that employees from the project site may use nearby parks and recreational facilities, the additional demand on nearby parks is not expected to increase in a manner that would require the need for or the provision of new or physically altered parks. Furthermore, Phase 2 of the proposed project includes the construction of a gymnasium, increasing the recreational facilities on-site. Therefore, impacts related to parks would be less than significant, and no mitigation measures are required.

a.v) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would result in substantial employment or population growth that could generate a demand for other public facilities, including roads, transit, utilities, and libraries, that would exceed the capacity available to serve the project site, necessitating new or physically altered public facilities, the construction of which would cause significant environmental impacts. Potential impacts to roads and transit are discussed in Section 3.17, Transportation, and potential impacts to utilities are discussed in Section 3.19, Utilities and Service Systems. With regards to libraries, the Long Beach Public Library (LBPL) serves the City. The LBPL is financed primarily by property taxes from the service area and operates 12 facilities. The demand for libraries is generated by the populations in the library's' service areas. The closest library to the project site is Burnett Library located approximately one mile southeast of the project site at 560 East Hill Street. Although it is possible that employees from the project site may use nearby libraries, the additional demand on nearby libraries is not expected to increase in a manner that would require the need for new or expanded library services. impacts related to libraries would be less than significant, and no mitigation measures are required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Public Services were determined to be less than significant, and no mitigation measures were required. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.16 RECREATION. Would the project:				
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**. A significant impact would occur if the proposed project results in an increased use of existing parkland and recreational facilities in a manner that would accelerate or induce their physical deterioration. The proposed project consists of the expansion of an existing school to include instruction for 9th through 12th grades and the addition of church-related facilities. Phase 2 of the proposed project includes the construction of a gymnasium, increasing the recreational facilities on-site. The gymnasium would hold a range of events including basketball, volleyball, physical education class, theater, parent/community meetings and events, dances and be used for general cafeteria use. Due to the small number of employees that would be introduced by the proposed project, the increased use of existing parks and recreational facilities would not be at a level that would result in physical deterioration of existing parks and other recreational facilities. Therefore, a less-than-significant impact would occur, and no mitigation measures would be required.

b) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project includes or requires the construction or expansion of recreational facilities which would have an adverse physical effect on the environment. As discussed above, the proposed project includes the construction of a gymnasium which would hold a range of events and be used for general cafeteria use. The potential environmental effects associated with the construction and operation of the gymnasium and other on-site recreational spaces have been evaluated throughout this Initial Study and would not have significant environmental effects. The proposed project would not require the need for additional recreational facilities. Therefore, a less-than-significant impact would occur, and no mitigation measures would be required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Recreation were determined to be less than significant, and no mitigation measures were required. As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.17 TRANSPORTATION. Would the project:				
a) Conflict with a 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 Traffic and Parking Impact Study has been prepared for the proposed project and is included in Appendix D of this IS/MND.

a) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The proposed project consists of the expansion of an existing school (TK-8) to include instruction for 9th through 12th grades and the addition of church-related facilities. The proposed project is not proposing land uses that are inconsistent with the current uses on the project site. The proposed project is consistent with the City's zoning and General Plan land use designations for the project site. In addition, the proposed project would not negatively affect the existing bus stops along Willow Street and Pacific Avenue or the sidewalks along Willow Street, Pacific Avenue, and Pine Avenue. All off-site improvements would provide a minimum of five feet clear dedicated right-of-way between any and all obstructions for pedestrian travel purposes compliant with the most recent American Disability Act (ADA) Guidelines. Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. A less-than-significant impact would occur, and no mitigation measures would be required.

b) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project conflicts or is inconsistent with CEQA Guidelines Section 15064.3. CEQA Guidelines Section 15064.3 identifies vehicles miles traveled (VMT) as the criteria for determining a project's transportation impact. As described in the City's adopted guidelines, conditions may exist that would screen out a project from CEQA analysis. These conditions may include a project's size, location, land use type, density, etc. If certain conditions are met, it can be presumed that a land development project would be presumed to have a less than significant impact under CEQA Guidelines Section 15064.3, subdivision (b). Given that the proposed project is anticipated to generate less than 500 daily trips, the project can be considered a small project. Therefore, based on the screening criteria, further analysis is not required. The proposed project's impacts are considered to be less than significant, and no mitigation measures would be required.

c) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project substantially increases hazards due to a geometric design feature or incompatible uses. In order to improve overall on-site circulation and connectivity, the proposed project

includes a request to vacate a portion of the alley located off of Willow Avenue along the east property line. This alley vacation will allow for improved access, additional parking, and to connect the project site to the adjacent parcel that contains an existing commercial office building. Access to the project site would be provided by 24-foot-wide driveway off Pacific Avenue and a 24-foot-wide driveway located off Willow Street, with primary access taken off of Pacific Avenue. Additionally, two gated access ways are proposed to provide access to the existing alleyway along the eastern property line. Access to the surrounding uses would not be disrupted. Parking for the proposed project would be provided via a driveway along Pacific Avenue, a new driveway along Willow Street (replacing the vacated alley off Willow Street), and the alley off Pine Avenue. Driveway access would be designed to City standards to ensure no hazardous design features related to vehicle and pedestrian mobility (sharp curves, line of sight obstructions) are included. Therefore, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses, and impacts would be less than significant, and no mitigation measures would be required.

d) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project results in inadequate emergency access. Emergency access to the project site would be available on the west side of the property along Pacific Avenue, from the east side of the property from the alley, along the south property line from 25th Street, and from the north side of the property along Willow Street. The Long Beach Fire Department (LBFD) has reviewed the site plan and confirmed that adequate fire hose pull access would be available, and there would be no need for the fire apparatus to maneuver on site. Therefore, impacts related to inadequate emergency access would be less than significant, and no mitigation measures would be required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Transportation/Traffic were determined to be less than significant with the implementation of mitigation measures. These mitigation measures would apply to the proposed project and include:

TRAF-1 As part of the subsequent environmental review for development projects that would be accommodated by the Midtown Specific Plan, a site-specific traffic study shall be prepared by the project applicant/developer to evaluate the project's potential traffic and transportation impacts and to identify specific improvements, as deemed necessary, to provide safe and efficient onsite circulation and access to the Midtown Specific Plan area.

TRAF -2 Prior to issuance of occupancy permits for development projects that would be accommodated by the Midtown Specific Plan, project applicants/developers shall make fair-share payments to the City of Long Beach toward construction of the traffic improvements listed below. The following traffic improvements and facilities are necessary to mitigate impacts of the Midtown Specific Plan and shall be included in the fee mechanism(s) to be determined by the City of Long Beach:

Existing (2014) With Project Improvements

Atlantic Avenue and Spring Street: Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. The intersection is currently built out to capacity and would require right-of-way acquisition by the City of Long Beach.

Cumulative Year (2035) With Project Improvements

- **Long Beach Boulevard and Spring Street**: Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Given the 74- foot cross section of Long Beach Boulevard, this improvement could be completed with restriping of the approach.
- **Pacific Avenue and Willow Street**: Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Given the 74-foot cross section of Long Beach Boulevard, this improvement could be completed with restriping of the approach.
- **Atlantic Avenue and Willow Street**: Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Given the 50-foot cross section of Atlantic Avenue, this improvement could be completed with restriping of the approach.
- **Atlantic Avenue and Spring Street**: Improve the southbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Implementation of this improvement also requires improving the southbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. The intersection is currently built out to capacity and would require right-of-way acquisition by the City of Long Beach.
- **Atlantic Avenue and 27th Street**: Construct a traffic signal at the intersection.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.18 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 California Native American tribe, and that is:				
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)?	☐	☑	☐	☐
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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☑	☐	☐

a-b) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would cause a substantial adverse change in the significance of a tribal cultural resource. The project site has been previously disturbed and is currently developed with an elementary and middle school, various wood structures, a metal overhang, a school office building, parish hall, a convent, and a commercial office building. No known tribal cultural resources have been previously discovered on the project site. However, in accordance with Assembly Bill 52 requirements, California Native American tribes traditionally and culturally affiliated with the geographic area of the project site were notified of the proposed project. The Gabrielino Tongva Indians of California (GTIOC) Tribe and the Gabrieleno Band of Mission Indians - Kizh Nation responded to the consultation request. The GTIOC Tribe ultimately withdrew their concerns on the proposed project. The Kizh Nation recommended that mitigation measures be imposed on the project site to ensure that any inadvertent discovery of tribal cultural resources encountered during ground-disturbing activities are properly documented, salvaged, and protected. With implementation of Mitigation Measures **TCR-1** through **TCR-3**, impacts related to the tribal cultural resources would be less than significant.

MITIGATION MEASURES

TCR-1 Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

A. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any “ground-disturbing activity” for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). “Ground-disturbing activity” shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.

B, A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.

C. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe.

D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

E. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

TCR-2 Unanticipated Discovery of Human Remains and Associated Funerary Objects

A. Native American human remains are defined in PRC 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 Public Resources Code Section 5097.98, are also to be treated according to this statute.

B. If Native American human remains and/or grave goods discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain 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 they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed.

C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).

D. Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, if the Kizh determines in its sole discretion that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (along with any other mitigation measures the Kizh monitor and/or archaeologist deems necessary). (CEQA Guidelines Section 15064.5(f).)

E. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall 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, it shall be offered to a local school or historical society in the area for educational purposes.

F. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

TCR-3 Procedures for Burials and Funerary Remains:

A. As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains.

B. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created.

C. The prepared soil and cremation soils 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. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials.

D. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will 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 will 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 will be removed.

E In the event preservation in place is not possible despite good faith efforts by the project applicant/developer and/or landowner, before ground-disturbing activities may resume on the project site, the landowner shall arrange a designated site

location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects.

F. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will 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 shall 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 shall be no publicity regarding any cultural materials recovered.

G. The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery data recovery-related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

Midtown Specific Plan EIR

The CEQA environmental checklist has been updated since the Midtown Specific Plan EIR was certified, and impacts related to Tribal Cultural Resources were not specifically evaluated. However, as discussed in the checklist questions above, impacts related to Tribal Cultural Resources have been evaluated for the proposed project and of mitigation measures have been identified to reduce impacts to less than significant in response to tribal consultation required and undertaken pursuant to Assembly Bill 52. The environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.19 UTILITIES AND SERVICE SYSTEMS. Would the project:				
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**. A significant impact would occur if the proposed project would require or result in the relocation or construction of new utilities or service systems, which would cause significant environmental effects.

Water. The Long Beach Water Department (LBWD) relies upon groundwater extracted locally from the Central Basin and imported water from Metropolitan Water District (MWD) to meet the City's demand. LBWD also provides recycled water to replace the use of potable water. According to the City's 2020 Urban Water Management Plan (UWMP), LBWD has identified and evaluated supply options to meet LBWD's demands through 2050. The proposed project would demand an estimated 5.17 million gallons (15.85 acre-feet [AFY]) of water per year according to CalEEMod estimations. As discussed in Sections 3.11 Land Use and Planning and Section 3.11, Population and Housing, the proposed project is consistent with the long-range plans for the area and would not cause substantial unplanned population growth. The projected increase in water demand from the proposed project would be within the forecasted water supply for 2050 as forecasted in the City's 2020 UWMP. Therefore, the proposed project's projected water demand would not require the construction of new water supply facilities, or expansion of existing facilities. Impacts would be less than significant, and no mitigation would be required.

Wastewater. The Long Beach Water Department operates and maintains the City's sewers. Wastewater from the project site would be collected through a series of existing and proposed on-site pipelines and conveyed to the City's sewer system via a connection to existing offsite sewer mains. Wastewater would then be treated at either the Long Beach Water Reclamation Plant (LBWRP) or the Joint Water Pollution Control

Plant (JWPCP) in the City of Carson. The LBWRP provides primary, secondary, and tertiary treatment. Currently, the LBWRP treats approximately 18 million gallons of wastewater per day (mgd) and has a capacity to treat 25 mgd. [22] The JWPCP treats approximately 260 mgd and has capacity to treat up to 400 mgd.[23] Therefore, both facilities have adequate capacity to accommodate anticipated nominal wastewater flows from the project site. The proposed project would not require the construction of new treatment facilities as the JWPCP has adequate capacity to treat the wastewater produced by the proposed project. Therefore, a less than significant impact would occur, and no mitigation measures would be required.

Stormwater Drainage. As discussed in Section 3.10 Hydrology and Water Quality, the proposed project would comply with NPDES regulations pertaining to the retention of stormwater and detention of site runoff into storm drains. Additionally, the proposed project would be required to implement BMPs in compliance with the City's LID requirements to reduce potential impacts to local stormwater drainage facilities. Therefore, impacts related to stormwater drainage would be less than significant, and no mitigation measures would be required.

Electric Power and Natural Gas. Energy use associated with operation of the proposed project would be typical of school and church uses, requiring electricity and natural gas for interior and exterior building lighting, HVAC, electronic equipment, machinery, refrigeration, appliances, security systems, and more. The proposed project would be served by Southern California Edison for electricity and Long Beach Energy Resources for natural gas. The project site is in a developed, urbanized portion of the City that is served by existing electrical power and natural gas services. According to CalEEMod, the proposed project would require approximately 466,999 kwh of electricity and 762,399 kbtu of natural gas per year. With implementation of the proposed project, new electricity and natural gas connections would be established for the proposed project. The applicant would be responsible for the relocation and undergrounding of overhead utility lines required in connection with the proposed project. However, no substantial electrical or natural gas infrastructure would need to be relocated to accommodate the proposed project. Therefore, impacts associated with electric power and natural gas facilities would be less than significant, and no mitigation measures would be required.

Telecommunications. Telecommunication services include phone, television, and internet providers. The project site is in a developed, urbanized portion of the City that is served by existing telecommunications services. The proposed project would potentially require additions of new on-site telecommunications infrastructure and potential upgrades and/or relocation of existing telecommunications infrastructure. Installation of new telecommunications infrastructure would be limited to on-site telecommunications distribution and minor off-site work associated with connections to the existing system. No upgrades to off-site telecommunications systems are anticipated to occur as a result of the proposed project. Any work that may affect services to the existing telecommunications lines would be coordinated with service providers and are not

[22]Long Beach Water, https:www.lbwater.org/water-sources/reclaimed-recycled-water/, accessed May 17, 2022.
[23]Los Angeles County Sanitation Districts, https:www.lacsd.org/services/wastewater-sewage/facilities/joint-water-pollution-control-plant/wastewater-treatment-process-at-jwpcp, accessed May 17, 2022.

expected to cause significant environmental effects. Therefore, impacts would be less than significant, and no mitigation measures would be required.

b) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would increase water usage such that the project site would not have enough water supplies during normal, dry and multiple dry years. As discussed in Response to Checklist Question 3.19a, the proposed project would result in a nominal increase in water demand, and the projected increase in water demand from the proposed project would within the forecast water supply for 2050. In addition, LBWD has adopted a Water Conservation and Water Supply Shortage Plan (Shortage Plan) to help prevent any water supply shortages. Sufficient water supplies would be available to serve the proposed project during normal, single dry, and multiple dry years. Therefore, impacts would be less than significant, and no mitigation measures would be required.

c) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project generates wastewater that exceeded the capacity of the project site's wastewater treatment provider. As discussed in Response to Checklist Question 3.19a, wastewater from the project site would be treated at the LBWRP or JWPCP, both of which have sufficient remaining available treatment capacity to adequately serve the proposed project. The LBWRP treats approximately 18 million gallons of wastewater per day (mgd) and has a capacity to treat 25 mgd .[24] The JWPCP treats approximately 260 mgd and has capacity to treat up to 400 mgd.[25] According to CalEEMod estimations, the proposed project would demand an estimated 5.17 million gallons of water per year or 14,164 gallons per day. Assuming 80 percent of the project's water demand would reach the wastewater treatment provider, the proposed project would generate 11,331 gallons of wastewater per day. The projected increase in the amount of wastewater that would be generated by the proposed project would be nominal and would not require the construction of new treatment facilities. Both the LBWRP and JWPCP have sufficient treatment capacity to adequately serve the proposed project. Therefore, less-than-significant impacts would occur, and no mitigation measures would be required

d-e) **Less-Than-Significant Impact**. A significant impact would occur if the proposed project would generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, impair the attainment of solid waste reduction goals, or would not comply with federal, state, and local management and reduction statutes and regulations related to solid waste. The Long Beach Environmental Services Bureau and private permitted waste haulers provide solid waste service for the City, and the majority of the refuse is taken to the Southeast Resource Recovery Facility (SERRF). The SERRF processes an average 1,290 tons of municipal solid waste each day. According to CalEEMod, the proposed project would generate approximately 195 tons of solid waste per year. This amount of solid waste generated by the proposed project is nominal compared to the daily amount of waste processed at the SERRF. In addition, the proposed project would comply with federal, State, and local statutes and regulations related to solid waste and recycling through participation in existing City waste diversion programs. Therefore, given the there is adequate remaining daily landfill capacity in the

[24]Long Beach Water, https:www.lbwater.org/water-sources/reclaimed-recycled-water/, accessed May 17, 2022.
[25]Los Angeles County Sanitation Districts, https:www.lacsd.org/services/wastewater-sewage/facilities/joint-water-pollution-control-plant/wastewater-treatment-process-at-jwpcp, accessed May 17, 2022.

region to accommodate project-generated waste, impacts related to solid waste and waste facilities would be less than significant, and no mitigation measures are required.

Midtown Specific Plan EIR

For projects within the Midtown Specific Plan area, impacts related to Utilities and Service Systems were determined to be less than significant with the implementation of mitigation measures. These mitigation measures would apply to the proposed project and include:

USS-1 Prior to the issuance of grading permits for individual development projects that would occur within the Midtown Specific Plan area and in lieu of implementing the sewer line replacement and upsizing improvements outlined in the Infrastructure Technical Report for Hydrology, Sewer, Water, and Water Quality prepared by Fuscoe Engineering (dated July 1, 2015), the project applicant/developer shall submit a site-specific sewer flow monitoring study to provide a more detailed analysis of the true sewer flow depths over time to determine if the potential for surcharge conditions would occur due to project development. The sewer flow monitoring study may indicate that there is sufficient capacity for the sewer lines identified in the Infrastructure Technical Report, as well indicate that they are above the design criteria (>0.75 d/D); and thereby, conclude that the replacement and upsizing improvements are not necessary. The sewer flow monitoring study shall be submitted to the City of Long Beach Development Services Department for review and approval.

USS-2 Prior to the issuance of grading permits for individual development projects that would be accommodated by the Midtown Specific Plan, the project applicant/developer shall provide evidence to the City of Long Beach Development Services Department that that the development project has been reviewed by the County Sanitation Districts of Los Angeles County (Sanitation Districts) and that a “Will Serve” letter has been issued by the Sanitation Districts. The “Will Serve” letter process is necessary in order to determine whether or not sufficient trunk sewer capacity exists to serve each development project and if the Sanitation Districts facilities will be affected by the development project.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.20 WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency 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**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as a Very High Fire Hazard Severity zone (VHFHSZ) and would substantially impair an adopted emergency response plan or emergency evacuation plan. A fire hazard severity zone is a mapped area developed by CalFire that designates zones with varying degrees of fire hazard (i.e., moderate, high, and very high). Areas that are designated as Very High or High Fire Hazard Severity Zones are the most likely to experience wildfire. The project site is located in an urbanized area of the City and is not located in or near a state responsibility area or in a VHFHSZ as identified by CalFire. The proposed project would not involve activities that would expose people or structures to the risk of loss, injury, or death involving wildland fires. The I-405 and I-710 are designated disaster routes in the City. Other roadways able to accommodating residents in a large-scale City-wide evacuation include Pacific Coast Highway, 7th Street, Long Beach Boulevard, Cherry Avenue, and Lakewood Boulevard.[26] The proposed project would not impede use of any disaster routes in the City. Therefore, the project site would not be subject to severe wildfires and would not impair the implementation of an adopted emergency evacuation plan for areas that are designated as VHFHSZ. No impact would occur.

b) **No Impact**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as VHFHSZ and would exacerbate wildfire risks that would expose project occupants to pollutant concentrations for a wildfire or the uncontrolled spread of a wildfire. As discussed above, the project site is not located in or near a state responsibility area or in a VHFHSZ. The site is located in an urbanized area of the City surrounded by commercial and residential uses. The proposed project would be required to comply with applicable sections of the City's Fire Code and would not involve activities that would expose people or structures to the risk

[26]City of Long Beach, *Hazards Mitigation Plan*, February 28, 2017.

of loss, injury, or death involving wildland fires. As the project site is not within a state responsibility area or a VHFHSZ, and the proposed project would be in compliance with the applicable sections of the City's Fire Code, it is unlikely that the proposed project would exacerbate wildfire risks. Therefore, no impact related wildfire would occur, and no mitigation measures are required

c) **No Impact**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as VHFHSZ and would require the installation or maintenance of infrastructure that may exacerbate the risk of fire or ongoing impacts to the environment. As discussed above, the project site is not located in or near a state responsibility area or in a VHFHSZ. The site is located in an urbanized area of the City surrounded by commercial and residential uses. The project site is adequately served by existing facilities and utilities and would not require additional installation or maintenance of roads, fuel breaks, emergency water sources, or power lines. Thus, the proposed project would not require installation or maintenance of associated structures that may exacerbate fire risk or that may require in temporary or ongoing impacts to the environment. Furthermore, the proposed project would adhere to relevant building design codes, including the City's Fire Code. Therefore, no impact related wildfire would occur, and no mitigation measures are required**.**

d) **No Impact**. A significant impact would occur if the proposed project would be located in or near a state responsibility area or land classified as VHFHSZ and would expose people or structures to significant risks after a wildfire, such as downslope or downstream flooding or landslides. As discussed above, the project site is not located in or near a state responsibility area or in a VHFHSZ. The site is located in an urbanized area of the City surrounded by commercial and residential uses. No slopes or hills are located in the vicinity of the project site and, thus, people or structures would not be exposed to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no impact related to wildfire risks would occur, and not mitigation measures are required.

Midtown Specific Plan EIR

The CEQA environmental checklist has been updated since the Midtown Specific Plan EIR was certified, and impacts related to Wildfire were not specifically evaluated. However, as discussed in the checklist questions above, impacts related to Wildfire have been evaluated for the proposed project, and no impact would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.21 MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of 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 which are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	☐	☑	☐	☐
c) Does the project have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐

a) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project would have the potential to degrade the quality of the environment; substantially reduce, threaten, or eliminate fish, plant, or wildlife habitats or population, including rare or endangered species; or eliminate historical, archaeological, or paleontological resources. The preceding analyses conclude that no significant impacts to the environment would occur with implementation of mitigation measures. All mitigation measures identified in this Initial Study would be implemented to ensure that the proposed project would not degrade the quality of the environment. As discussed in Response to Checklist Question 3.4d above, the existing vegetation on-site may potentially provide nesting sites for migratory birds. However, Mitigation Measure **BR-1** would require any tree removal or trimming to occur outside of the bird-breeding season (i.e., only between August 16 and January 31) in compliance with the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC). As discussed in Response to Checklist Question 3.5a, although the existing horizontal metal louvers over the windows of the existing school building facing 25th Street are not proposed to be demolished, Mitigation Measure **CR-1** is recommended to document this character defining feature as an important feature in mid-century modern design prior to any construction activities. As discussed in Response to Checklist Question 3.5b above, encountering unanticipated archaeological resources during ground disturbance is a possibility. However, if archaeological resources are encountered, Mitigation Measure **CR-2** would ensure that archaeological resources would not be adversely affected during ground disturbing activities. As recommended in the Phase I ESA prepared for the project site, Mitigation Measures **HAZ-1** would require the abandonment of a monitoring well in the northwest parking lot. As discussed in Response to Checklist Question 3.9b, ACM and LCM may be encountered during demolition and renovation activities. Mitigation Measures **HAZ-2** and **HAZ-2** would require ACM and LCD to be identified and disposed of in

accordance with all state and local regulations. As discussed in Response to Checklist Question 3.13a above, construction of the proposed project would not result in a violation of the construction noise regulations However, Mitigation Measures **N-1** through **N-6**, which are standard best management practices to control noise at offsite uses would reduce construction noise levels at nearby sensitive receptors. As discussed in Response to Checklist Questions 3.18a and 3.18b, Mitigation Measures **TCR-1** through **TCR-3** have been identified to ensure that any inadvertent discovery of tribal cultural resources encountered during ground-disturbing activities are properly documented, salvaged, and protected. Therefore, impacts would be less than significant with implementation of mitigation measures.

b) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact would occur if the proposed project, in conjunction with related projects, would result in impacts that are less than significant when viewed separately but significant when viewed together. As discussed in this Initial Study, potential impacts related to biological resources, cultural resources, hazardous materials, noise, and tribal resources; access would be reduced to less than significant levels with implementation of the incorporated mitigation measures. The proposed project would have either no impact or a less-than-significant impact for all other environmental topic areas considered in this Initial Study.

c) **Less-Than-Significant Impact with Mitigation Incorporated**. A significant impact may occur if the proposed project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. As discussed throughout this Initial Study, the proposed project would have less-than-significant impacts (with and without incorporation of mitigation measures) or no impacts on the environment. Mitigation measures have been prescribed, where applicable, to reduce all potential environmental impacts to less than significant levels. Upon implementation of mitigation measures included in this Initial Study, any imposed conditions of approval, and compliance with existing regulations, the proposed project would not have the potential to result in substantial adverse impacts on human beings either directly or indirectly. Therefore, a less-than-significant impact is anticipated with incorporation of the mitigation measures identified in this Initial Study.

Midtown Specific Plan EIR

As discussed in the responses to the Initial Study checklist questions above, the environmental analysis of the proposed project is consistent with the Midtown Specific Plan EIR with incorporation of the Mitigation Measures **HYD**-1 though **HYD-4**, **TRAF-1** and **TRAF-2**, and **USS-1** and **USS-2** identified in the Midtown Specific Plan EIR and this Initial Study.

4.0 LIST OF PREPARERS AND SOURCES CONSULTED

This section documents all the sources that contributed in the preparation of this IS/MND.

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APPENDIX A

Air Quality Analysis

Technical Study

TO: Alexis Oropeza
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FROM: Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
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DATE: October 18, 2022

RE: **Holy Innocents Parish Church and School Project – Air Quality Assessment**

Introduction

Terry A. Hayes Associates Inc. (TAHA) completed an Air Quality Assessment for the Holy Innocents Parish Church and School Project (proposed project) in accordance with provisions of California Environmental Quality Act (CEQA) Statutes and Guidelines. It is anticipated that this Assessment will be used to support an Initial Study/Mitigated Negative Declaration for the proposed project. This Assessment is organized as follows:

- Project Description
- Air Quality Topical Information
- Regulatory Framework
- Existing Setting
- Significance Thresholds and Local Standards
- Methodology
- Impact Assessment
- References

Project Description

Holy Innocents Parish has a near century-long history in the City of Long Beach and is the second largest parish in the city. The existing Holy Innocents Parish Church includes an on-site rectory is located at 425 East 20th Street in the City of Long Beach. In 1956, due to limited land area near the existing church location, the Parish purchased a tract of six lots at 25th Street and Pacific Avenue, which would ultimately be the location of the existing Holy Innocents Parish School. The school has operated at this location since 1958 and has grown over the years to serve Transitional Kindergarten to 8th Grade students.

Holy Innocents Parish proposes a three-phased development to expand the existing parish school and relocate and construct a new church, rectory, convent, and gymnasium near the existing school located at 2500 Pacific Avenue in order to develop a cohesive parish campus. **Figure 1** shows the location of the proposed project. The three development phases of the proposed project are as follows:

1. **Phase 1**. Demolition of three one-story wood structures totaling 1,674 square feet (sq. ft.), a metal overhang, the existing playground, and 27 parking stalls. New construction will include a 19,378 sq. ft. two-story school building consisting of eight classrooms, an administration space, and a library. No additional parking is to be constructed at this time with 105 parking spaces to remain. The existing hall and convent will remain. Phase 1 construction is anticipated to begin Summer 2022 and to be completed by Fall 2023.
2. **Phase 2**. Demolition of the 7,812 sq. ft. parish hall located near the east property line and 5,439 sq. ft. corner commercial office building located to the east across the existing alley. A 9,414 sq. ft. single-story gymnasium will be constructed in the northeast corner of the subject site. The gymnasium will include a small kitchen, stage, and restrooms. Phase 2 construction is anticipated to commence in Fall 2024 and complete by Spring 2025.
3. **Phase 3**. Demolition of the 5,193 sq. ft. seven-bedroom convent and 1,100 sq. ft. single-story school office. Construction will include the 19,532 sq. ft. church, 3,433 sq. ft. two-story rectory, 3,298 sq. ft. two-story convent and 1,680 sq. ft. two-story parish office. The church structure will include a single-story assembly area, a basement area with restrooms, storage, and mechanical room, and a choir loft. Phase 3 construction is anticipated to commence in Winter 2026 and complete in Spring 2027.

The proposed development will include the expanded operations of the existing elementary school and the construction of a new gymnasium, church, rectory, and convent. The anticipated hours of operations for the proposed project are as follows:

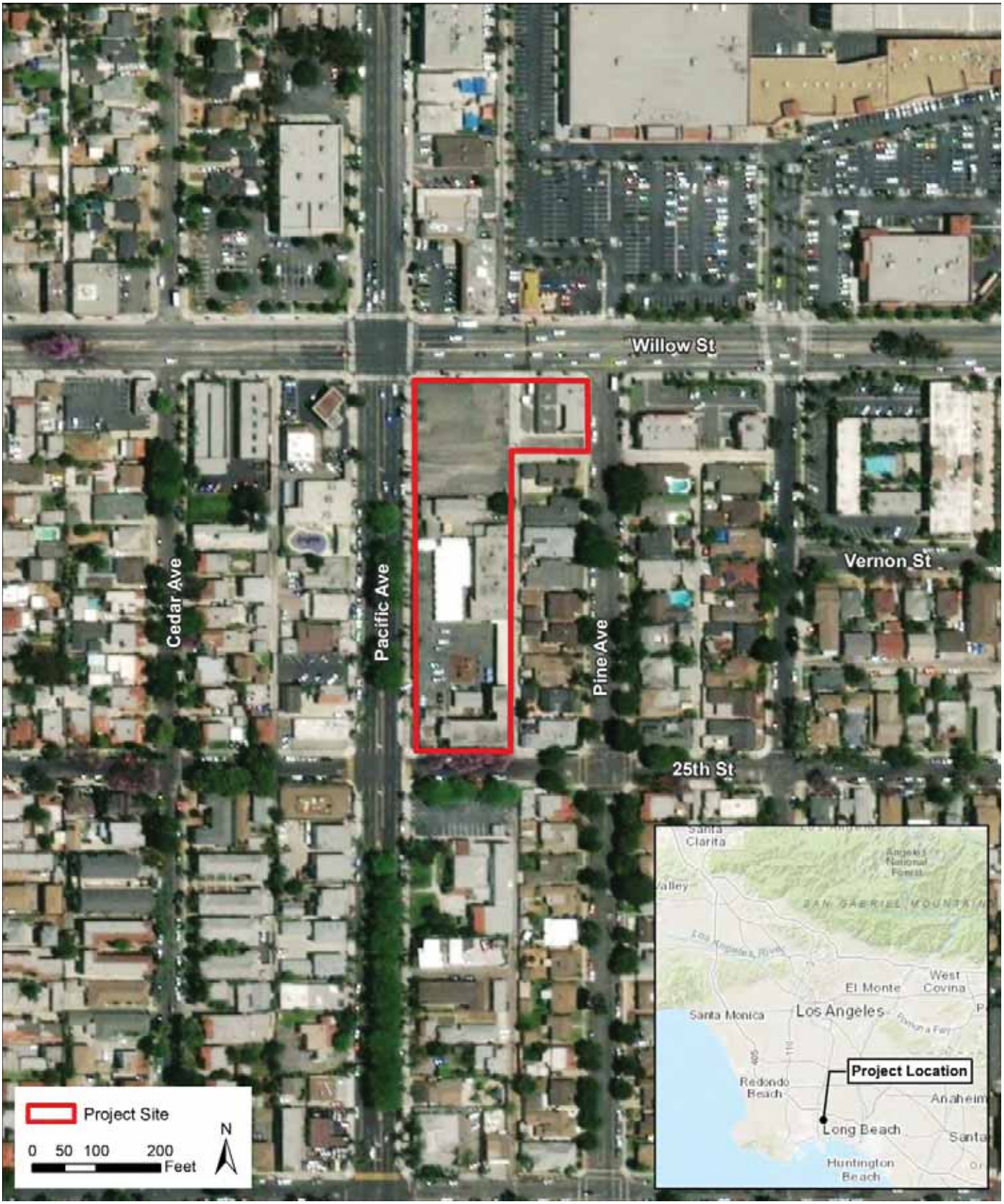
- **Church**: 6:30 am – 8:00 pm;
- **Parish School Office**: Monday – Friday 9:30 am – 3:30 pm; Sunday 10:30 am – 2:00 pm;
- **School**: Monday – Friday 7:30 am – 5:30 pm; and
- **Gymnasium**: 8:00 am – 5:00 pm.

School Operations

The parish school currently offers education for Transitional Kindergarten to 8th Grade. The new school building will enable the parish school to include instruction for 9th through 12th Grade. There will be 22-23 students in each grade level. The student body will be made up of roughly 315 students, 16 teachers, six aids, two facility staff, one main office secretary and one business office staff. The gymnasium will hold a range of events including basketball, volleyball, physical education class, theater, parent/community meetings and events, dances and be used for general cafeteria use.

Church Operations

Weekday masses will be offered at 8:00 am and 7:00 pm, and confessions are scheduled for 7:00 pm on Fridays. Approximately 30-40 people attend weekday masses. Saturday masses are held at 8:00 am and 5:00 pm. Approximately 30-40 people attend the morning mass and approximately 250 attend the evening mass. Weddings and funerals are also scheduled on many Saturdays. Sunday masses run from 7:00 am to 2:00 pm with an hour between each service to allow ample time for attendees to vacate the parking lot before the next group arrives. Approximately 250 people and two to three administrative staff attend Sunday masses. The church will be open ahead of each mass to allow for quiet reflection and prayer.



Source: TAHA, 2022.

Holy Innocents Parish Church and School Project
Air Quality Assessment

TAHA 2021-094

CITY OF LONG BEACH

FIGURE 1

PROJECT LOCATION

Air Quality Topical Information

Air quality is typically characterized by ambient air concentrations of seven specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. These specific pollutants, known as criteria air pollutants, are pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. These pollutants are common by products of human activities and have been documented through scientific research to cause adverse health effects. The federal ambient concentration criteria are known as the National Ambient Air Quality Standards (NAAQS), and the California ambient concentration criteria are referred to as the California Ambient Air Quality Standards (CAAQS). Federal criteria air pollutants include ground-level ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), respirable particulate matter ten microns or less in diameter (PM_{10}), fine particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead. In addition to the federal criteria pollutants, the state regulates visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Air toxics are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. Air toxics are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects; however, the emission of a toxic chemical does not automatically create a health hazard. Air toxics include, but are not limited to, diesel PM, metals, gases absorbed by particles, and certain vapors from fuels and other sources.

Regulatory Framework

The following discussion includes relevant regulations, policies, and programs that have been adopted by federal, state, regional, and local agencies to protect air quality and public health.

Federal

The Clean Air Act (CAA) governs air quality at the national level and the USEPA is responsible for enforcing the regulations provided in the CAA. Under the CAA, the USEPA is authorized to establish NAAQS that set protective limits on concentrations of air pollutants in ambient air. Enforcement of the NAAQS is required under the 1977 CAA and subsequent amendments. As required by the CAA, NAAQS have been established for the seven criteria air pollutants: O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and Pb. These pollutants are common byproducts of human activities and have been documented through scientific research to cause adverse health effects. The CAA grants the USEPA authority to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS concentrations have been met on a regional scale relying upon air monitoring data from the most recent three-year period. The NAAQS are summarized in **Table 1**.

State

Air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). The CCAA is administered by the California Air Resources Board (CARB) at the state level and by the air quality management districts at the regional and local levels. The CCAA requires all areas of the state to achieve and maintain the CAAQS by the earliest feasible date, which is determined in the most recent SIP based on existing emissions and reasonably foreseeable control measures that will be implemented in the future.

TABLE 1: AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS DESIGNATIONS

Pollutant	Averaging Period	California		Federal	
		Standards (CAAQS)	Attainment Status	Standards (NAAQS)	Attainment Status
Ozone (O_3)	1-Hour Average	0.09 ppm (180 µg/m^3)	Nonattainment	--	--
	8-Hour Average	0.070 ppm (137 µg/m^3)	Nonattainment	0.070 ppm (137 µg/m^3)	Nonattainment – Extreme
Carbon Monoxide (CO)	1-Hour Average	20 ppm (23 mg/m^3)	Attainment	35.0 ppm (40 mg/m^3)	Attainment
	8-Hour Average	9.0 ppm (10 mg/m^3)	Attainment	9.0 ppm (10 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	1-Hour Average	0.18 ppm (338 µg/m^3)	Attainment	0.10 ppm (188 µg/m^3)	Attainment
	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment
Sulfur Dioxide (SO_2)	1-Hour Average	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment
	24-Hour Average	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment
	Annual Arithmetic Mean	--	--	0.030 ppm (80 µg/m^3)	Attainment
Respirable Particulate Matter (PM_{10})	24-Hour Average	50 µg/m^3	Nonattainment	150 µg/m^3	Attainment (Maintenance)
	Annual Arithmetic Mean	20 µg/m^3	Nonattainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-Hour Average	--	--	35 µg/m^3	Nonattainment
	Annual Arithmetic Mean	12 µg/m^3	Nonattainment	12.0 µg/m^3	Nonattainment
Lead (Pb)	30-day Average	1.5 µg/m^3	Attainment	--	--
	Calendar Quarter	--	--	1.5 µg/m^3	Unclassified/ Attainment
	Rolling 3-Month Average	--	--	0.15 µg/m^3	Unclassified/ Attainment
Sulfates	24-Hour Average	25 µg/m^3	Attainment	**No Federal Standards**	
Hydrogen Sulfide	1-Hour Average	0.03 ppm (42 µg/m^3)	Attainment		
Vinyl Chloride	24-Hour Average	0.01 ppm (26 µg/m^3)	Attainment		

CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; µg/m^3 = micrograms per cubic meter.
SOURCE: SCAQMD, *NAAQS and CAAQS Attainment Status for South Coast Air Basin*, October 2018.

The CAAQS are also summarized in **Table 1**, which also presents the attainment status designations for the Los Angeles County portion of the South Coast Air Basin (SCAB). The CARB's statewide comprehensive air toxics program was established in the early 1980's. The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics. Under the Toxic Air Contaminant Identification and Control Act, the CARB is required to prioritize the identification and control of air toxics emissions. In selecting substances for review, the CARB must consider criteria relating to the risk of harm to public health, such as amount or potential amount of emissions, manner of and exposure to usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community.

Regional

The 1977 Lewis Air Quality Management Act established the South Coast Air Quality Management District (SCAQMD) in order to coordinate air quality planning efforts throughout Southern California. The SCAQMD has jurisdiction over a total area of 10,743 square miles, consisting of the SCAB—which comprises 6,745 square miles including Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties—and the Riverside County portion of the Salton Sea and Mojave Desert Air Basins. The proposed project would be located in the City of Long Beach, which is situated in the SCAB portion of Los Angeles County and is within the jurisdiction of the SCAQMD.

The SCAQMD is tasked with preparing regional programs and policies designed to improve air quality within the SCAB, which are assessed and published in the form of the Air Quality Management Plan (AQMP). The AQMP is updated every four years to evaluate the effectiveness of the adopted programs and policies and to forecast attainment dates for nonattainment pollutants to support the State Implementation Plan based on measured regional air quality and anticipated implementation of new technologies and emissions reductions. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options, and includes available, proven, and cost-effective strategies to pursue multiple goals in promoting reductions in greenhouse gas (GHG) emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 8-hour O_3 standard, the 2012 annual $PM_{2.5}$ standard, and the 2006 24-hour $PM_{2.5}$ standard. The 2016 AQMP acknowledged that the most significant air quality challenge in the SCAB is the reduction of NO_X emissions sufficient to meet the upcoming ozone standard deadlines. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approach attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the NAAQS are not met by the established date.

The AQMP also includes an element that is related to transportation and sustainable communities planning. Pursuant to California Health and Safety Code Section 40450, the Southern California Association of Governments (SCAG) has the responsibility of preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. The analysis incorporated into the 2016 AQMP is based on the forecasts contained within the SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). SCAG approved the 2020-2045 RTP/SCS, although these growth projections have not been incorporated by SCAQMD into the current AQMP.

The SCAQMD has also established various rules to manage and improve air quality in the SCAB. The proposed project proponent would comply with all applicable SCAQMD Rules and Regulations pertaining to construction activities, including, but not limited to:

- Rule 402 (Nuisance) states that a person should not emit air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such 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) controls fugitive dust through various requirements including, but not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, limiting vehicle speeds on unpaved roads to 15 miles per hour, and maintaining effective cover over exposed areas. Rule 403 also prohibits the release of fugitive dust emissions from any active operation, open storage piles, or disturbed surface area beyond the property line of the emission source and prohibits particulate matter deposits on public roadways.

Existing Setting

Geography and Climatology

The SCAB is subject to high levels of air pollution due to the immense magnitude of emissions sources and the combination of topography, low mean atmospheric mixing height, and abundant sunshine. Although the SCAB has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The mountains and hills surrounding the SCAB contribute to the variation of rainfall, temperature, and winds throughout the region. During the spring and early summer, pollution produced during any one day is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere close to the Earth's surface. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants become more concentrated in urbanized areas with pollution sources of greater magnitude.

Local Air Quality

Air quality within the SCAB region is characterized by concentrations of air pollutants measured at 37 monitoring stations located throughout the SCAQMD jurisdiction. The SCAB is divided geographically into 38 source receptors areas (SRAs), each of which contains an air quality monitoring station excluding SRA 7. The SRA boundaries were drawn based on proximity to the nearest air monitoring station, the local emission inventories, and surrounding topography. The proposed project is in SRA 4 (South Coastal Los Angeles County).

Local air quality at the project site is best characterized by concentrations of pollutants recorded at the Long Beach – Hudson (2425 Webster Avenue) air monitoring station that was operated by the SCAQMD until its closure at the end of 2019. The Long-Beach – Hudson station measured concentrations of hourly average and eight-hour average O_3, hourly NO_2, one-hour and eight-hour CO, and 24-hour average PM_{10}. Concentrations of $PM_{2.5}$ are supplemented with data from the nearby South Long Beach (1305 East Pacific Coast Highway) monitoring station.

Table 2 presents a summary of the air monitoring concentrations collected at the Long Beach – Hudson and South Long Beach stations for the most recent three years of published data. Ambient concentrations of O_3, PM_{10} and $PM_{2.5}$ exceeded the associated NAAQS and CAAQS numerous times over the three-year period between from 2018 to 2020 as the SCAMD has not yet published 2021 data. The data demonstrate the ongoing challenges that the region faces with regards to improving air quality and bringing the SCAB into attainment of the federal and state standards.

TABLE 2: SUMMARY OF AMBIENT AIR QUALITY DATA IN THE PROJECT AREA

Pollutant	Air Quality Standards	Project Area Statistics	2018	2019	2020
Ozone (O_3)	1-hr Average (ppm)	Maximum 1-hr Concentration	0.074	0.074	0.105
	State Standard: 0.090 ppm	Frequency Std. Exceeded	0	0	4
	8-hr Average (ppm)	Maximum 8-hr Concentration	0.063	0.064	0.083
	State Standard: 0.070 ppm	Frequency Std. Exceeded	0	0	4
Nitrogen Dioxide (NO_2)	1-hr Average (ppm)	Maximum 1-hr Concentration	0.085	0.072	0.075
	State Standard: 0.18 ppm	Frequency Std. Exceeded	0	0	0
	National Standard: 0.10 ppm	Frequency Std. Exceeded	0	0	0
Carbon Monoxide (CO)	1-hr Average (ppm)	Maximum 1-hr Concentration	4.7	3.0	Not Monitored
	State Standard: 20.0 ppm	Frequency Std. Exceeded	0	0	
	National Standard: 35.0 ppm	Frequency Std. Exceeded	0	0	
	8-hr Average (ppm)	Maximum 8-hr Concentration	2.1	2.1	
	State Standard: 9.0 ppm	Frequency Std. Exceeded	0	0	
	National Standard: 9.0 ppm	Frequency Std. Exceeded	0	0	
Sulfur Dioxide (SO_2)	1-hr Average (ppm)	Maximum 1-hr Concentration	0.011	0.009	Not Monitored
	State Standard: 0.25 ppm	Frequency Std. Exceeded	0	0	
	National Standard: 0.10 ppm	Frequency Std. Exceeded	0	0	
Respirable Particulate Matter (PM_{10})	24-hr Average ($\mu g/m^3$)	Maximum 24-hr Concentration	55	72	59
	State Standard: 50 $\mu g/m^3$	Frequency Std. Exceeded	1	2	2
	National Standard: 150 $\mu g/m^3$	Frequency Std. Exceeded10	0	0	0
	Annual Average ($\mu g/m^3$)	Annual Avg. Concentration	24	21	25
	State Standard: 20 $\mu g/m^3$	Annual Std. Exceeded?	Yes	Yes	Yes
Fine Particulate Matter ($PM_{2.5}$)	24-hr Average ($\mu g/m^3$)	Maximum 24-hr Concentration	46	28	39
	National Standard: 35 $\mu g/m^3$	Frequency Std. Exceeded	2	0	1
	Annual Average ($\mu g/m^3$)	Annual Avg. Concentration	11	9	11
	State Standard: 12 $\mu g/m^3$	Annual Std. Exceeded?	No	No	No
	National Standard: 12 $\mu g/m^3$	Annual Std. Exceeded?	No	No	No

SOURCE: SCAQMD, *Historical Data by Year – Air Quality Data Tables (2018, 2019, 2020)*, https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year, accessed March 31, 2022.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The CARB has identified the following groups who are most likely to experience adverse health effects due to exposure to air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, land uses that constitute sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The SCAQMD has established 500 meters (1,640 feet) as the distance for assessing localized air quality impacts. The nearest sensitive receptors are single-family residences approximately 20 feet east from the project site across an existing alleyway. Additional sensitive receptors are shown in **Figure 2**.

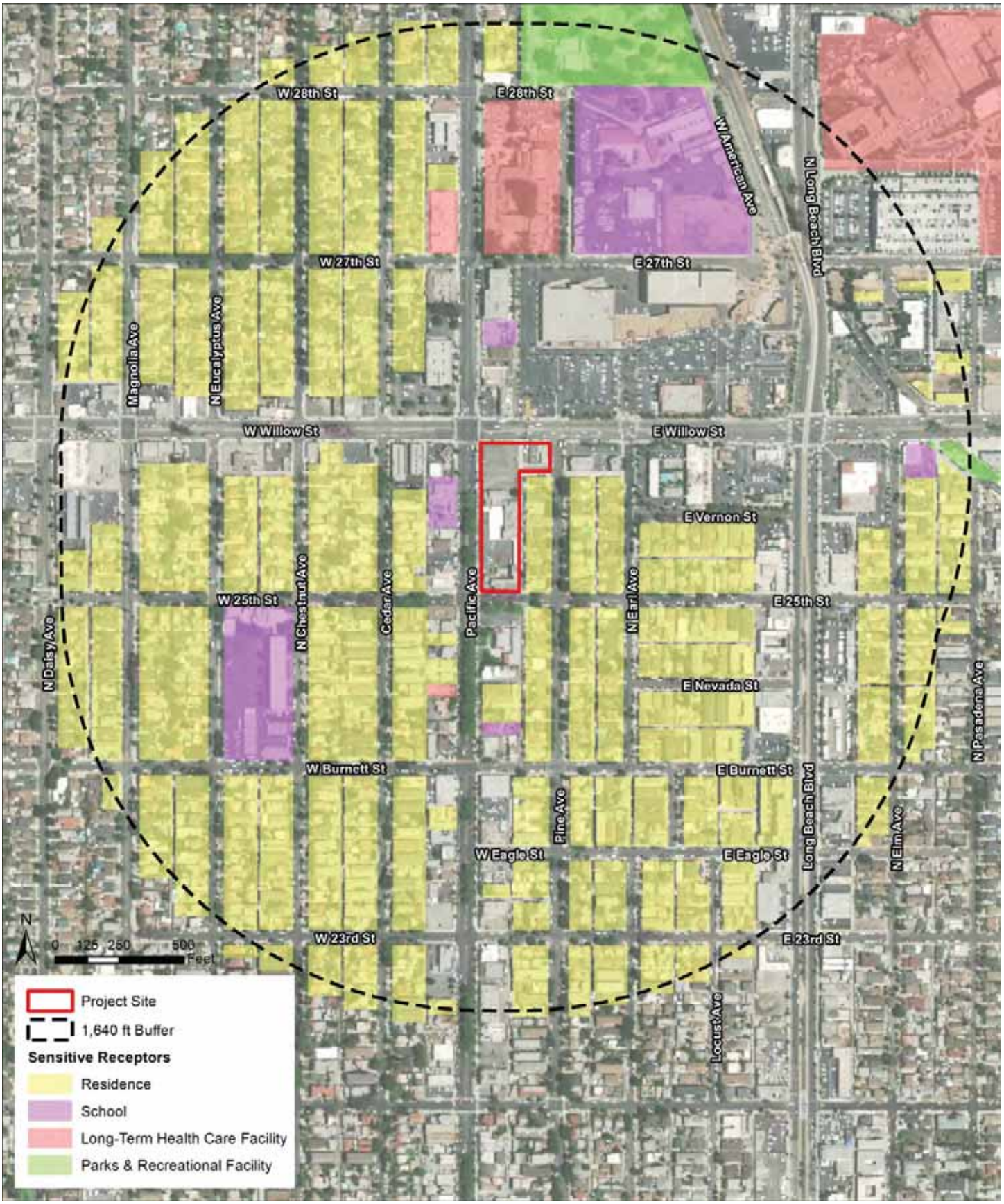
Significance Thresholds

This Assessment was undertaken to determine whether construction or operation of the proposed project would have the potential to result in significant environmental impacts related to Air Quality in the context of the Appendix G Environmental Checklist criteria of the CEQA Statute and Guidelines. Implementation of the proposed project may result in a significant environmental impact related to Air Quality if the proposed project would:

[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 nonattainment under an applicable federal or state ambient air quality standard;
[c] Expose sensitive receptors to substantial pollutant concentrations; and/or
[d] Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SCAQMD published a CEQA Air Quality Handbook to guide air quality assessments for CEQA projects within its jurisdiction.[1] SCAQMD methodologies recommend that air pollutant emissions be analyzed in both regional and local contexts. Regional emissions refer to all emissions that would be associated with construction and operation of a project, while localized emissions refer to only those emissions that would be produced by sources located on the project site. To assist in the assessment of air pollutant emissions under impact criteria a), b), and c) above, the SCAQMD established maximum daily threshold values for air pollutant emissions from CEQA projects within the SCAB. The mass daily thresholds were derived using regional emissions modeling techniques to prevent the occurrence of air quality violations that would obstruct implementation of the regional AQMP and hinder efforts to improve regional air quality.

[1]SCAQMD, *CEQA Air Quality Handbook (Version 3)*, revised 2001.



Source: TAHA, 2022.

Holy Innocents Parish Church and School Project
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CITY OF LONG BEACH

FIGURE 2

AIR QUALITY SENSITIVE RECEPTORS

Table 3 presents the SCAQMD mass daily air quality significance thresholds for regional and localized emissions of regulated pollutants resulting from construction activities.[2] The localized significance thresholds (LSTs) are quantitative screening values specific to SCAQMD SRA 4—Southwest Coastal Los Angeles County—applicable to a one-acre construction disturbance area within 25 meters of sensitive receptors and were obtained from the SCAQMD LST guidance document.[3,4] The LST values were derived from regionally-specific modeling of emissions and are designed to prevent localized pollutant concentrations from exceeding applicable ambient air quality standards at sensitive land uses near construction sites.

TABLE 3: SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS – MASS DAILY EMISSIONS

Pollutant	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
CONSTRUCTION						
Regional Threshold (lbs./day)	75	100	550	150	150	55
Localized Threshold (lbs./day)	--	57	585	--	4	3
OPERATIONS						
Regional Threshold (lbs./day)	55	55	550	150	150	55
Localized Threshold (lbs./day)	--	57	585	--	1	1

Note: lbs./day = pounds per day
SOURCE: SCAQMD, 2009 and 2019.

Methodology

Construction emissions are estimated using the latest California Emissions Estimator Model (CalEEMod, Version 2020.4.0). Emission factors applicable to the Los Angeles County portion of the SCAB were used in conjunction with conservative estimates of equipment activity, worker trips, fugitive dust generation, and material hauling trips to estimate maximum daily emissions during each construction phase. Construction emissions were estimated using detailed equipment inventories and construction scheduling information provided by the engineering team combined with emissions factors from the EMFAC2017 and OFFROAD models that are built into the CalEEMod program. Operational emissions are also estimated using CalEEMod. Permanent sources of emissions include automobile trips, landscaping equipment, and natural gas combustion. A transportation analysis estimated that the proposed project would generate up to 328 daily vehicle trips.

Impact Assessment

[a] Would the proposed project conflict with or obstruct implementation of the applicable air quality plan? (Less-Than-Significant Impact)

The following analysis addresses the consistency with applicable SCAQMD and SCAG policies, including the AQMP and growth projections within the RTP/SCS. The purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with federal and state air quality standards on the designated SIP timeline. The consistency determination at the environmental review stage in the planning process plays an essential role in local agency project review by linking local planning to the

[2]SCAQMD, *SCAQMD Air Quality Significance Thresholds – Mass Daily Thresholds*, March 2015.
[3]SCAQMD, *Final Localized Significance Threshold Methodology Appendix C Mass Rate Lookup Tables*, October 21, 2009.
[4]SCAQMD, *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*, 2008.

AQMP. The SCAQMD acknowledges that generally, only new or amended General Plan Elements, Specific Plans, and significant projects need to undergo a comprehensive consistency review. This is because the AQMP control strategy is based on regional and local growth projections from General Plans and metropolitan planning organizations (MPOs, such as SCAG). As such, projects consistent with the local General Plans and underlying regional and local growth projections are considered consistent with the AQMP.

Consistency with the AQMP means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the federal and state ambient air quality standards. In accordance with the procedures established in the SCAQMD CEQA Air Quality Handbook, the following criteria are required to be addressed in order to determine the consistency with applicable SCAQMD and SCAG policies:

- Would the proposed project result in any of the following?
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or,
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Would the proposed project exceed the assumptions utilized in preparing the AQMP?
  - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - Does the project include air quality mitigation measures; or,
  - To what extent is project development consistent with the AQMP land use policies?

The first indicator is assessed by comparing emissions of air pollutants that would be produced by construction and operation of the proposed project to the SCAQMD significance thresholds, both on regional and localized scales. The air quality significance thresholds were designed to prevent the occurrence and exacerbation of air quality violations resulting from construction and operation of individual CEQA projects in the context of existing ambient air quality conditions. The second indicator is assessed by determining consistency of permanent operations with population, housing, and employment assumptions that were used in the development of the AQMP and the RTP/SCS.

Construction

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips by construction workers and haul trucks traveling to and from the project site. Fugitive dust emissions would primarily result from site preparation (e.g., demolition and grading) activities. NO_X emissions would predominantly result from the use of construction equipment and haul truck trips. The assessment of construction air quality impacts considers all of these emissions sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. It is mandatory for all construction projects in the SCAB to comply with SCAQMD Rule 403 for Fugitive Dust.

Rule 403 control requirements include best management practices (BMPs) to prevent the generation of visible dust plumes. BMP strategies include, but are not limited to, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system or other control measures to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with the provisions and best management practices propagated by Rule 403—such as the application of water as a dust suppressant to exposed stockpiles and disturbed ground surfaces—would reduce regional fugitive dust PM_{10} and $PM_{2.5}$ emissions associated with construction activities by approximately 61 percent.

Table 4 shows the maximum unmitigated daily emissions that would be generated by sources involved in construction of Phase 1 for each activity, differentiated by source location either on-site of off-site to facilitate the analysis of both regional and localized emissions. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

TABLE 4: ESTIMATED DAILY CONSTRUCTION EMISSIONS – PHASE 1

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
DEMOLITION						
On-Site Emissions	0.6	5.5	7.3	<0.1	0.4	0.3
Off-Site Emissions	0.1	1.4	1.0	<0.1	0.4	0.1
Total	***0.7***	***6.9***	***8.3***	***<0.1***	***0.8***	***0.4***
SITE PREPARATION						
On-Site Emissions	0.5	5.3	5.0	<0.1	0.5	0.2
Off-Site Emissions	0.1	0.1	0.7	<0.1	0.2	0.1
Total	***0.6***	***5.4***	***57***	***<0.1***	***0.7***	***0.3***
BUILDING CONSTRUCTION						
On-Site Emissions	0.5	5.6	8.9	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.6	1.2	<0.1	0.1	0.1
Total	***0.6***	***6.2***	***10.1***	***<0.1***	***0.3***	***0.3***
PAVING						
On-Site Emissions	0.4	3.4	4.6	<0.1	0.2	0.2
Off-Site Emissions	<0.1	0.3	0.4	<0.1	0.2	<0.1
Total	***0.4***	***3.7***	***5.0***	***<0.1***	***0.3***	***0.2***
ARCHITECTURAL COATING						
On-Site Emissions	12.2	1.6	2.6	<0.1	0.1	0.1
Off-Site Emissions	<0.1	0.2	0.4	<0.1	0.1	<0.1
Total	***12.2***	***1.8***	***3.0***	***<0.1***	***0.2***	***<0.1***
BUILDING CONSTRUCTION + PAVING + ARCHITECTURAL COATING						
On-Site Emissions	13.0	10.6	16.1	<0.1	0.5	0.4
Off-Site Emissions	0.2	1.2	2.0	<0.1	0.7	0.2
Total	***13.2***	***11.8***	***18.1***	***<0.1***	***1.2***	***0.6***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**13.2**	**11.8**	**18.1**	**<0.1**	**1.2**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	--	**10.6**	**16.1**	--	**0.5**	**0.4**
Localized Significance Threshold	--	57	585	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Numbers may not add precisely due to rounding.
SOURCE: TAHA, 2022.

Table 5 shows the maximum unmitigated daily emissions that would be generated by sources involved in construction of Phase 2 for each activity, differentiated by source location either on-site of off-site to facilitate the analysis of both regional and localized emissions. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

TABLE 5: ESTIMATED DAILY CONSTRUCTION EMISSIONS – PHASE 2

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
DEMOLITION						
On-Site Emissions	0.6	5.8	7.6	<0.1	0.5	0.3
Off-Site Emissions	0.1	1.7	1.4	<0.1	0.6	0.2
Total	***0.8***	***7.5***	***8.9***	***<0.1***	***1.1***	***0.5***
SITE PREPARATION						
On-Site Emissions	0.5	5.3	5.6	<0.1	0.3	0.2
Off-Site Emissions	0.1	0.1	0.9	<0.1	03	0.1
Total	***0.6***	***5.3***	***5.6***	***<0.1***	***0.7***	***0.3***
BUILDING CONSTRUCTION						
On-Site Emissions	0.5	5.7	9.4	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.7	1.5	<0.1	0.5	0.2
Total	***0.6***	***6.4***	***10.9***	***<0.1***	***0.8***	***0.4***
PAVING						
On-Site Emissions	0.5	3.2	4.6	<0.1	0.2	0.1
Off-Site Emissions	<0.1	0.3	0.4	<0.1	0.2	0.1
Total	***0.5***	***3.5***	***5.0***	***<0.1***	***0.3***	***0.2***
ARCHITECTURAL COATING						
On-Site Emissions	6.5	1.5	2.6	<0.1	0.1	0.1
Off-Site Emissions	<0.1	0.2	0.4	<0.1	0.1	<0.1
Total	***6.5***	***1.7***	***3.0***	***<0.1***	***0.2***	***0.1***
BUILDING CONSTRUCTION + PAVING + ARCHITECTURAL COATING						
On-Site Emissions	7.4	10.5	16.7	<0.1	0.4	0.4
Off-Site Emissions	0.2	1.2	2.2	<0.1	0.9	0.2
Total	***7.7***	***11.6***	***18.9***	***<0.1***	***1.3***	***0.6***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**7.7**	**11.6**	**18.9**	**<0.1**	**1.3**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	--	**10.5**	**16.7**	--	**0.5**	**0.4**
Localized Significance Threshold	--	57	585	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Numbers may not add precisely due to rounding.
SOURCE: TAHA, 2022.

Table 6 shows the maximum unmitigated daily emissions that would be generated by sources involved in construction of Phase 3 for each activity, differentiated by source location either on-site of off-site to facilitate the analysis of both regional and localized emissions. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

TABLE 6: ESTIMATED DAILY CONSTRUCTION EMISSIONS – PHASE 3

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
DEMOLITION						
On-Site Emissions	0.7	5.9	8.6	<0.1	0.6	0.3
Off-Site Emissions	0.1	1.7	1.3	<0.1	0.6	0.2
Total	***0.8***	***7.6***	***9.9***	***<0.1***	***1.2***	***0.5***
SITE PREPARATION						
On-Site Emissions	0.5	4.7	5.5	<0.1	0.3	0.2
Off-Site Emissions	0.1	<0.1	0.8	<0.1	0.3	0.1
Total	***0.6***	***4.7***	***6.3***	***<0.1***	***0.6***	***0.3***
BUILDING CONSTRUCTION						
On-Site Emissions	0.4	5.0	8.9	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.6	1.3	<0.1	0.2	0.1
Total	***0.5***	***3.5***	***5.0***	***<0.1***	***0.3***	***0.2***
PAVING						
On-Site Emissions	0.4	3.2	4.6	<0.1	0.2	0.1
Off-Site Emissions	<0.1	0.3	0.4	<0.1	0.2	0.2
Total	***0.4***	***3.5***	***5.0***	***<0.1***	***0.3***	***0.2***
ARCHITECTURAL COATING						
On-Site Emissions	16.3	1.5	2.6	<0.1	0.1	0.1
Off-Site Emissions	<0.1	0.2	0.3	<0.1	0.1	0.1
Total	***16.3***	***1.7***	***2.9***	***<0.1***	***0.2***	***0.1***
BUILDING CONSTRUCTION + PAVING + ARCHITECTURAL COATING						
On-Site Emissions	17.2	9.8	16.1	<0.1	0.4	0.4
Off-Site Emissions	0.2	1.1	2.0	<0.1	0.9	0.2
Total	***17.3***	***10.9***	***18.1***	***<0.1***	***1.2***	***0.6***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**17.3**	**10.9**	**18.1**	**<0.1**	**1.2**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	--	**9.8**	**16.1**	--	**0.4**	**0.4**
Localized Significance Threshold	--	57	585	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Numbers may not add precisely due to rounding.
SOURCE: TAHA, 2022.

Operations

The primary source of operational emissions associated with the proposed project would be automobile trips. Additional long-term area sources of emissions include landscaping equipment and natural gas combustion. Following completion of Phase 1, implementation of the proposed project would add 228 daily vehicle trips to the campus and following completion of Phase 3 an additional 136 trips would be generated associated with the church. There would be a total of 328 daily trips after accounting for a reduction of 36 passenger vehicle trips as transit trips. **Table 7** shows the emissions modeling completed using CalEEMod demonstrates that the proposed project would not generate permanent pollutant emissions that would exceed SCAQMD thresholds, and air quality impacts would be less than significant.

TABLE 7: ESTIMATED DAILY OPERATIONAL EMISSIONS

Phase & Source	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
PHASE 1 (2024)						
Area Sources	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
Energy Sources	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile Sources	0.6	0.7	6.5	<0.1	1.5	0.4
2024 Operations Total	***1.1***	***0.8***	***6.5***	***<0.1***	***1.5***	***0.4***
PHASE 2 (2025)						
Area Sources	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Energy Sources	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile Sources	0	0	0	0	0	0
2024 + 2025 Operations Total	***1.4***	***0.9***	***6.6***	***<0.1***	***1.5***	***0.4***
PHASE 3 (2027)						
Area Sources	0.6	<0.1	0.2	<0.1	<0.1	<0.1
Energy Sources	<0.1	0.1	0.1	<0.1	<0.1	<0.1
Mobile Sources	0.3	0.3	2.4	<0.1	0.6	0.2
2024 + 2025 + 2027 Operations Total	***2.3***	***1.3***	***9.2***	***<0.1***	***2.1***	***0.6***
REGIONAL ANALYSIS						
Maximum Daily Operation Emissions	**2.3**	**1.3**	**9.2**	**<0.1**	**2.1**	**0.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

SOURCE: TAHA, 2022.

The second consistency criterion requires that the proposed project not exceed the assumptions in the AQMP, thereby rendering the regional emissions inventory inaccurate. Implementation of the proposed project would not introduce new housing and related population to the City of Long Beach. The expansion of an existing school and the addition of church-related facilities would not require a substantial number of new employees at the project site. The proposed project would not be considered a significant project by the SCAQMD as it would not affect growth projections incorporated into the ambient air quality standard attainment timelines. The proposed project would not have any potential to result in growth that would exceed the projections incorporated into the AQMP or the RTP/SCS, and air quality impacts would be less than significant.

Mitigation Measures

Impacts would be less than significant, and no mitigation measures are required.

[b] Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? (Less-Than-Significant Impact)

Construction and Operations

The SCAB is currently designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ under the State standards and nonattainment for O_3 and $PM_{2.5}$ under the federal standards. Therefore, a project may result in a cumulatively considerable air quality impact under this criterion if daily emissions of ozone precursors (VOC and NO_X) or particulate matter (PM_{10} and $PM_{2.5}$) exceed applicable air quality thresholds of significance established by the SCAQMD. The SCAQMD designed the significance thresholds to prevent projects from exceeding the ambient air quality standards and potentially resulting in air quality violations. The SCAQMD suggests that if any quantitative air quality significance threshold is exceeded by an individual project during construction activities or operation, that project is considered cumulatively considerable and would be required to implement effective and feasible mitigation measures to reduce air quality impacts.

Conversely, the SCAQMD propagates the guidance that if an individual project would not exceed the regional mass daily thresholds, then it is generally not considered to be cumulatively significant. This method of impact determination allows for the screening of individual projects that would not represent substantial new sources of emissions in the SCAB; it also serves to exclude smaller projects from the responsibility of identifying potentially concurrent new or proposed construction and operation emissions nearby since the incremental contribution to regional emissions is minor. As shown in above, implementation of the proposed project would not exceed any applicable SCAQMD regional mass daily thresholds during construction or operation. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter and impacts would be less than significant.

Mitigation Measures

Impacts would be less than significant, and no mitigation measures are required.

[c] Would the proposed project expose sensitive receptors to substantial pollutant concentrations? (Less-Than-Significant Impact)

Construction

The use of heavy-duty construction equipment and haul trucks during construction activities would release diesel PM to the atmosphere through exhaust emissions. Diesel PM is a known carcinogen, and extended exposure to elevated concentrations of diesel PM can increase excess cancer risks in individuals. However, carcinogenic risks are typically assessed over timescales of several years to decades, as the carcinogenic dose response is cumulative in nature. Short-term exposures to diesel PM would have to involve extremely high concentrations in order to exceed the SCAQMD air quality significance threshold of 10 excess cancers per million. Over the course of construction activities, average diesel PM emissions from on-site equipment would be approximately 0.26 pounds per day. It is unlikely that diesel PM concentrations would be of any public health concern during the construction period, and diesel PM emissions would cease upon completion of construction activities. Therefore, the proposed project would result in a less-than-significant impact related to construction toxic air contaminants emissions.

Operations

The SCAQMD recommends that a health risk assessment be conducted for substantial sources of diesel PM emissions (e.g., truck stops and distribution facilities). The proposed project is not one that would generate a substantial number of heavy-duty truck trips within the region, such as a distribution warehouse. It is anticipated that the proposed project would generate fewer truck trips than a typical commercial development and no other sources of operational air toxic emissions have been identified at the project site. Therefore, the proposed project would not result in an impact related to operational pollutants.

Mitigation Measures

Impacts would be less than significant, and no mitigation measures are required.

[d] Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (No Impact)

Construction

Odors are the only potential construction emissions other than the sources addressed above. Potential sources that may produce objectionable odors during construction activities include equipment exhaust, application of asphalt and architectural coatings, and other interior and exterior finishes. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site and would be temporary in nature and would not persist beyond the termination of construction activities. The proposed project would utilize standard construction techniques, and the odors would be typical of most construction sites and temporary in nature. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. The construction contractor will ensure that activities comply with SCAQMD Rules 401 (Visible Emissions) and 402 (Nuisance) to prevent the occurrence of public nuisances and visible dust plumes traveling off-site. Therefore, the proposed project would result not result in an impact related to construction odors and other nuisances.

Operations

Odors are the only potential operational emissions other than the sources addressed above. Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The operations would comply with SCAQMD Rule 402, which would prohibit any air quality discharge that would be a nuisance or pose any harm to individuals of the public. Therefore, the proposed project would not result in a significant impact related to operational odors or other nuisances.

Mitigation Measures

Impacts would be less than significant, and no mitigation measures are required.

Midtown Specific Plan EIR

The Midtown Specific Plan EIR identified significant impacts related to Air Quality that were determined to remain significant and unavoidable despite the implementation of mitigation measures. However, the air quality analysis for the proposed project determined that impacts would be less than significant, and therefore implementation of the mitigation measures included in the Midtown Specific Plan EIR are not warranted in this instance.

References

California Air Pollution Control Officer's Association, *California Emissions Estimator Model (Version 2020.4.0) User's Guide*, May 2021.

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (Version 3), revised 2001.

South Coast Air Quality Management District, *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*, 2008.

South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology Appendix C – Localized Significance Threshold Screening Tables*, October 21, 2009.

South Coast Air Quality Management District, *Historical Data By Year (2018, 2019, 2020)*, https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year, accessed March 31, 2022.

South Coast Air Quality Management District, *NAAQS and CAAQS Attainment Status for South Coast Air Basin*, October 2018.

South Coast Air Quality Management District, *SCAQMD Air Quality Significance Thresholds*, March 2015.

Southern California Association of Governments, *Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy*, September 2020.

TECHNICAL APPENDIX

California Emission Estimator Model (CalEEMod) Output Files

- **Phase 1 CalEEMod Output – Daily (S+W)**
- **Phase 2 CalEEMod Output – Daily (S+W)**
- **Phase 3 CalEEMod Output – Daily (S+W)**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish Church and School - Phase 1

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	19.38	1000sqft	0.40	19,378.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 1 site plan indicates 0.40 acres of ground disturbance.

Construction Phase - Phase 1 schedule provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Trips and VMT - Project specific construction trips.

Demolition -

Grading -

Vehicle Trips - Trip rate calculated by dividing 205 daily trips by 19.38 kSF.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	5.00	15.00
tblLandUse	LandUseSquareFeet	19,380.00	19,378.00
tblLandUse	LotAcreage	0.44	0.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripNumber	8.00	160.00
tblTripsAndVMT	VendorTripNumber	3.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblVehicleTrips	WD_TR	19.52	10.58

2.0 Emissions Summary

Holy Innocents Parish Church and School - Phase 1 - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.6976	6.6169	10.1554	0.0186	0.4887	0.2748	0.7221	0.1148	0.2633	0.3734	0.0000	1,853.9575	1,853.9575	0.4226	0.0863	1,885.6511
2024	12.2166	5.9560	10.0856	0.0184	0.4250	0.2009	0.6259	0.1148	0.1849	0.2997	0.0000	1,822.1260	1,822.1260	0.4220	0.0462	1,846.4397
Maximum	**12.2166**	**6.6169**	**10.1554**	**0.0186**	**0.4887**	**0.2748**	**0.7221**	**0.1148**	**0.2633**	**0.3734**	**0.0000**	**1,853.9575**	**1,853.9575**	**0.4226**	**0.0863**	**1,885.6511**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.6976	6.6169	10.1554	0.0186	0.4250	0.2748	0.6705	0.1148	0.2633	0.3658	0.0000	1,853.9575	1,853.9575	0.4226	0.0863	1,885.6511
2024	12.2166	5.9560	10.0856	0.0184	0.4250	0.2009	0.6259	0.1148	0.1849	0.2997	0.0000	1,822.1260	1,822.1260	0.4220	0.0462	1,846.4397
Maximum	**12.2166**	**6.6169**	**10.1554**	**0.0186**	**0.4250**	**0.2748**	**0.6705**	**0.1148**	**0.2633**	**0.3658**	**0.0000**	**1,853.9575**	**1,853.9575**	**0.4226**	**0.0863**	**1,885.6511**

Holy Innocents Parish Church and School - Phase 1 - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	6.97	0.00	3.83	0.00	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Energy	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Mobile	0.6215	0.6327	6.3680	0.0142	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,450.9470	1,450.9470	0.0940	0.0579	1,470.5426
Total	**1.0605**	**0.6863**	**6.4151**	**0.0146**	**1.4877**	**0.0142**	**1.5019**	**0.3963**	**0.0135**	**0.4097**		**1,515.3468**	**1,515.3468**	**0.0952**	**0.0591**	**1,535.3254**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Energy	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Mobile	0.6215	0.6327	6.3680	0.0142	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,450.9470	1,450.9470	0.0940	0.0579	1,470.5426
Total	**1.0605**	**0.6863**	**6.4151**	**0.0146**	**1.4877**	**0.0142**	**1.5019**	**0.3963**	**0.0135**	**0.4097**		**1,515.3468**	**1,515.3468**	**0.0952**	**0.0591**	**1,535.3254**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2023	8/28/2023	5	20	
2	Site Preparation	Site Preparation	9/4/2023	9/22/2023	5	15	
3	Building Construction	Building Construction	9/25/2023	6/28/2024	5	200	
4	Paving	Paving	7/1/2024	7/19/2024	5	15	
5	Architectural Coating	Architectural Coating	7/22/2024	8/9/2024	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 29,067; Non-Residential Outdoor: 9,689; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	1.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	0.00	160.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	30.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0824	0.0000	0.0824	0.0125	0.0000	0.0125			0.0000			0.0000
Off-Road	0.6163	5.5283	7.2848	0.0119		0.2668	0.2668		0.2558	0.2558		1,139.8144	1,139.8144	0.2062		1,144.9684
Total	**0.6163**	**5.5283**	**7.2848**	**0.0119**	**0.0824**	**0.2668**	**0.3492**	**0.0125**	**0.2558**	**0.2682**		**1,139.8144**	**1,139.8144**	**0.2062**		**1,144.9684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0174	1.0439	0.2786	4.6800e-003	0.1400	6.5800e-003	0.1466	0.0384	6.3000e-003	0.0447		514.1281	514.1281	0.0283	0.0816	539.1660
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0814**	**1.0885**	**1.0014**	**6.6600e-003**	**0.3636**	**7.9200e-003**	**0.3715**	**0.0977**	**7.5400e-003**	**0.1052**		**714.1432**	**714.1432**	**0.0334**	**0.0863**	**740.6827**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0321	0.0000	0.0321	4.8700e-003	0.0000	4.8700e-003			0.0000			0.0000
Off-Road	0.6163	5.5283	7.2848	0.0119		0.2668	0.2668		0.2558	0.2558	0.0000	1,139.8144	1,139.8144	0.2062		1,144.9684
Total	**0.6163**	**5.5283**	**7.2848**	**0.0119**	**0.0321**	**0.2668**	**0.2990**	**4.8700e-003**	**0.2558**	**0.2606**	**0.0000**	**1,139.8144**	**1,139.8144**	**0.2062**		**1,144.9684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0174	1.0439	0.2786	4.6800e-003	0.1400	6.5800e-003	0.1466	0.0384	6.3000e-003	0.0447		514.1281	514.1281	0.0283	0.0816	539.1660
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0814**	**1.0885**	**1.0014**	**6.6600e-003**	**0.3636**	**7.9200e-003**	**0.3715**	**0.0977**	**7.5400e-003**	**0.1052**		**714.1432**	**714.1432**	**0.0334**	**0.0863**	**740.6827**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2651	0.0000	0.2651	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	0.4870	5.2497	5.0266	9.3700e-003		0.2320	0.2320		0.2135	0.2135		906.8947	906.8947	0.2933		914.2274
Total	**0.4870**	**5.2497**	**5.0266**	**9.3700e-003**	**0.2651**	**0.2320**	**0.4972**	**0.0286**	**0.2135**	**0.2421**		**906.8947**	**906.8947**	**0.2933**		**914.2274**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0640**	**0.0446**	**0.7228**	**1.9800e-003**	**0.2236**	**1.3400e-003**	**0.2249**	**0.0593**	**1.2400e-003**	**0.0605**		**200.0151**	**200.0151**	**5.0400e-003**	**4.6200e-003**	**201.5167**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1034	0.0000	0.1034	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	0.4870	5.2497	5.0266	9.3700e-003		0.2320	0.2320		0.2135	0.2135	0.0000	906.8947	906.8947	0.2933		914.2274
Total	**0.4870**	**5.2497**	**5.0266**	**9.3700e-003**	**0.1034**	**0.2320**	**0.3354**	**0.0112**	**0.2135**	**0.2246**	**0.0000**	**906.8947**	**906.8947**	**0.2933**		**914.2274**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0640**	**0.0446**	**0.7228**	**1.9800e-003**	**0.2236**	**1.3400e-003**	**0.2249**	**0.0593**	**1.2400e-003**	**0.0605**		**200.0151**	**200.0151**	**5.0400e-003**	**4.6200e-003**	**201.5167**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4803	5.6030	8.8631	0.0130		0.2194	0.2194		0.2018	0.2018		1,254.2073	1,254.2073	0.4056		1,264.3482
Total	**0.4803**	**5.6030**	**8.8631**	**0.0130**		**0.2194**	**0.2194**		**0.2018**	**0.2018**		**1,254.2073**	**1,254.2073**	**0.4056**		**1,264.3482**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0161	0.5374	0.2082	2.6100e-003	0.0897	2.7000e-003	0.0924	0.0258	2.5800e-003	0.0284		280.3955	280.3955	9.4000e-003	0.0403	292.6436
Worker	0.0960	0.0669	1.0842	2.9700e-003	0.3353	2.0200e-003	0.3374	0.0889	1.8600e-003	0.0908		300.0226	300.0226	7.5600e-003	6.9200e-003	302.2750
Total	**0.1121**	**0.6043**	**1.2924**	**5.5800e-003**	**0.4250**	**4.7200e-003**	**0.4297**	**0.1148**	**4.4400e-003**	**0.1192**		**580.4181**	**580.4181**	**0.0170**	**0.0472**	**594.9186**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4803	5.6030	8.8631	0.0130		0.2194	0.2194		0.2018	0.2018	0.0000	1,254.2073	1,254.2073	0.4056		1,264.3482
Total	**0.4803**	**5.6030**	**8.8631**	**0.0130**		**0.2194**	**0.2194**		**0.2018**	**0.2018**	**0.0000**	**1,254.2073**	**1,254.2073**	**0.4056**		**1,264.3482**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0161	0.5374	0.2082	2.6100e-003	0.0897	2.7000e-003	0.0924	0.0258	2.5800e-003	0.0284		280.3955	280.3955	9.4000e-003	0.0403	292.6436
Worker	0.0960	0.0669	1.0842	2.9700e-003	0.3353	2.0200e-003	0.3374	0.0889	1.8600e-003	0.0908		300.0226	300.0226	7.5600e-003	6.9200e-003	302.2750
Total	**0.1121**	**0.6043**	**1.2924**	**5.5800e-003**	**0.4250**	**4.7200e-003**	**0.4297**	**0.1148**	**4.4400e-003**	**0.1192**		**580.4181**	**580.4181**	**0.0170**	**0.0472**	**594.9186**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4613	5.3578	8.8743	0.0130		0.1963	0.1963		0.1806	0.1806		1,254.4225	1,254.4225	0.4057		1,264.5652
Total	**0.4613**	**5.3578**	**8.8743**	**0.0130**		**0.1963**	**0.1963**		**0.1806**	**0.1806**		**1,254.4225**	**1,254.4225**	**0.4057**		**1,264.5652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5385	0.2038	2.5600e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		276.1845	276.1845	9.4300e-003	0.0398	288.2656
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.1051**	**0.5982**	**1.2112**	**5.4400e-003**	**0.4250**	**4.6500e-003**	**0.4297**	**0.1148**	**4.3800e-003**	**0.1191**		**567.7035**	**567.7035**	**0.0163**	**0.0462**	**581.8746**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4613	5.3578	8.8743	0.0130		0.1963	0.1963		0.1806	0.1806	0.0000	1,254.4225	1,254.4225	0.4057		1,264.5652
Total	**0.4613**	**5.3578**	**8.8743**	**0.0130**		**0.1963**	**0.1963**		**0.1806**	**0.1806**	**0.0000**	**1,254.4225**	**1,254.4225**	**0.4057**		**1,264.5652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5385	0.2038	2.5600e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		276.1845	276.1845	9.4300e-003	0.0398	288.2656
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.1051**	**0.5982**	**1.2112**	**5.4400e-003**	**0.4250**	**4.6500e-003**	**0.4297**	**0.1148**	**4.3800e-003**	**0.1191**		**567.7035**	**567.7035**	**0.0163**	**0.0462**	**581.8746**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3763	3.4102	4.6127	7.4800e-003		0.1632	0.1632		0.1519	0.1519		696.4189	696.4189	0.2086		701.6338
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3763**	**3.4102**	**4.6127**	**7.4800e-003**		**0.1632**	**0.1632**		**0.1519**	**0.1519**		**696.4189**	**696.4189**	**0.2086**		**701.6338**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.9300e-003	0.3077	0.1164	1.4700e-003	0.0512	1.5500e-003	0.0528	0.0148	1.4900e-003	0.0162		157.8197	157.8197	5.3900e-003	0.0227	164.7232
Worker	0.0298	0.0199	0.3358	9.6000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		97.1730	97.1730	2.2800e-003	2.1500e-003	97.8697
Total	**0.0388**	**0.3276**	**0.4523**	**2.4300e-003**	**0.1630**	**2.1900e-003**	**0.1652**	**0.0444**	**2.0800e-003**	**0.0465**		**254.9927**	**254.9927**	**7.6700e-003**	**0.0249**	**262.5929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3763	3.4102	4.6127	7.4800e-003		0.1632	0.1632		0.1519	0.1519	0.0000	696.4189	696.4189	0.2086		701.6338
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3763**	**3.4102**	**4.6127**	**7.4800e-003**		**0.1632**	**0.1632**		**0.1519**	**0.1519**	**0.0000**	**696.4189**	**696.4189**	**0.2086**		**701.6338**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.9300e-003	0.3077	0.1164	1.4700e-003	0.0512	1.5500e-003	0.0528	0.0148	1.4900e-003	0.0162		157.8197	157.8197	5.3900e-003	0.0227	164.7232
Worker	0.0298	0.0199	0.3358	9.6000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		97.1730	97.1730	2.2800e-003	2.1500e-003	97.8697
Total	**0.0388**	**0.3276**	**0.4523**	**2.4300e-003**	**0.1630**	**2.1900e-003**	**0.1652**	**0.0444**	**2.0800e-003**	**0.0465**		**254.9927**	**254.9927**	**7.6700e-003**	**0.0249**	**262.5929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.9756					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2067	1.6135	2.6297	4.2300e-003		0.0678	0.0678		0.0672	0.0672		403.4129	403.4129	0.0553		404.7953
Total	**12.1823**	**1.6135**	**2.6297**	**4.2300e-003**		**0.0678**	**0.0678**		**0.0672**	**0.0672**		**403.4129**	**403.4129**	**0.0553**		**404.7953**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4600e-003	0.1539	0.0582	7.3000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.4000e-004	8.1200e-003		78.9098	78.9098	2.6900e-003	0.0114	82.3616
Worker	0.0298	0.0199	0.3358	9.6000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		97.1730	97.1730	2.2800e-003	2.1500e-003	97.8697
Total	**0.0343**	**0.1738**	**0.3940**	**1.6900e-003**	**0.1374**	**1.4200e-003**	**0.1388**	**0.0370**	**1.3300e-003**	**0.0384**		**176.0829**	**176.0829**	**4.9700e-003**	**0.0135**	**180.2313**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.9756					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2067	1.6135	2.6297	4.2300e-003		0.0678	0.0678		0.0672	0.0672	0.0000	403.4129	403.4129	0.0553		404.7953
Total	**12.1823**	**1.6135**	**2.6297**	**4.2300e-003**		**0.0678**	**0.0678**		**0.0672**	**0.0672**	**0.0000**	**403.4129**	**403.4129**	**0.0553**		**404.7953**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4600e-003	0.1539	0.0582	7.3000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.4000e-004	8.1200e-003		78.9098	78.9098	2.6900e-003	0.0114	82.3616
Worker	0.0298	0.0199	0.3358	9.6000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		97.1730	97.1730	2.2800e-003	2.1500e-003	97.8697
Total	**0.0343**	**0.1738**	**0.3940**	**1.6900e-003**	**0.1374**	**1.4200e-003**	**0.1388**	**0.0370**	**1.3300e-003**	**0.0384**		**176.0829**	**176.0829**	**4.9700e-003**	**0.0135**	**180.2313**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6215	0.6327	6.3680	0.0142	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,450.9470	1,450.9470	0.0940	0.0579	1,470.5426
Unmitigated	0.6215	0.6327	6.3680	0.0142	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,450.9470	1,450.9470	0.0940	0.0579	1,470.5426

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	205.04	0.00	0.00	504,749	504,749
Total	205.04	0.00	0.00	504,749	504,749

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
NaturalGas Unmitigated	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	547.362	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Total		**5.9000e-003**	**0.0537**	**0.0451**	**3.2000e-004**		**4.0800e-003**	**4.0800e-003**		**4.0800e-003**	**4.0800e-003**		**64.3956**	**64.3956**	**1.2300e-003**	**1.1800e-003**	**64.7782**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.547362	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Total		**5.9000e-003**	**0.0537**	**0.0451**	**3.2000e-004**		**4.0800e-003**	**4.0800e-003**		**4.0800e-003**	**4.0800e-003**		**64.3956**	**64.3956**	**1.2300e-003**	**1.1800e-003**	**64.7782**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Unmitigated	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0492					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Total	**0.4331**	**2.0000e-005**	**1.9800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.2400e-003**	**4.2400e-003**	**1.0000e-005**		**4.5200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0492					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Total	**0.4331**	**2.0000e-005**	**1.9800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.2400e-003**	**4.2400e-003**	**1.0000e-005**		**4.5200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish Church and School - Phase 1

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	19.38	1000sqft	0.40	19,378.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 1 site plan indicates 0.40 acres of ground disturbance.

Construction Phase - Phase 1 schedule provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Trips and VMT - Project specific construction trips.

Demolition -

Grading -

Vehicle Trips - Trip rate calculated by dividing 205 daily trips by 19.38 kSF.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	5.00	15.00
tblLandUse	LandUseSquareFeet	19,380.00	19,378.00
tblLandUse	LotAcreage	0.44	0.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripNumber	8.00	160.00
tblTripsAndVMT	VendorTripNumber	3.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblVehicleTrips	WD_TR	19.52	10.58

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.7013	6.6676	10.0743	0.0185	0.4887	0.2748	0.7221	0.1148	0.2633	0.3735	0.0000	1,843.9551	1,843.9551	0.4227	0.0867	1,875.7689
2024	12.2188	5.9876	10.0114	0.0183	0.4250	0.2009	0.6259	0.1148	0.1850	0.2997	0.0000	1,807.2595	1,807.2595	0.4221	0.0467	1,831.7359
Maximum	**12.2188**	**6.6676**	**10.0743**	**0.0185**	**0.4887**	**0.2748**	**0.7221**	**0.1148**	**0.2633**	**0.3735**	**0.0000**	**1,843.9551**	**1,843.9551**	**0.4227**	**0.0867**	**1,875.7689**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.7013	6.6676	10.0743	0.0185	0.4250	0.2748	0.6705	0.1148	0.2633	0.3659	0.0000	1,843.9551	1,843.9551	0.4227	0.0867	1,875.7689
2024	12.2188	5.9876	10.0114	0.0183	0.4250	0.2009	0.6259	0.1148	0.1850	0.2997	0.0000	1,807.2595	1,807.2595	0.4221	0.0467	1,831.7359
Maximum	**12.2188**	**6.6676**	**10.0743**	**0.0185**	**0.4250**	**0.2748**	**0.6705**	**0.1148**	**0.2633**	**0.3659**	**0.0000**	**1,843.9551**	**1,843.9551**	**0.4227**	**0.0867**	**1,875.7689**

Holy Innocents Parish Church and School - Phase 1 - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	6.97	0.00	3.83	0.00	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Energy	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Mobile	0.6108	0.6832	6.2236	0.0136	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,389.4693	1,389.4693	0.0965	0.0604	1,409.8870
Total	**1.0498**	**0.7368**	**6.2706**	**0.0139**	**1.4877**	**0.0142**	**1.5019**	**0.3963**	**0.0135**	**0.4097**		**1,453.8691**	**1,453.8691**	**0.0978**	**0.0616**	**1,474.6697**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Energy	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Mobile	0.6108	0.6832	6.2236	0.0136	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,389.4693	1,389.4693	0.0965	0.0604	1,409.8870
Total	**1.0498**	**0.7368**	**6.2706**	**0.0139**	**1.4877**	**0.0142**	**1.5019**	**0.3963**	**0.0135**	**0.4097**		**1,453.8691**	**1,453.8691**	**0.0978**	**0.0616**	**1,474.6697**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2023	8/28/2023	5	20	
2	Site Preparation	Site Preparation	9/4/2023	9/22/2023	5	15	
3	Building Construction	Building Construction	9/25/2023	6/28/2024	5	200	
4	Paving	Paving	7/1/2024	7/19/2024	5	15	
5	Architectural Coating	Architectural Coating	7/22/2024	8/9/2024	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 29,067; Non-Residential Outdoor: 9,689; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	1.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	0.00	160.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	30.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0824	0.0000	0.0824	0.0125	0.0000	0.0125			0.0000			0.0000
Off-Road	0.6163	5.5283	7.2848	0.0119		0.2668	0.2668		0.2558	0.2558		1,139.8144	1,139.8144	0.2062		1,144.9684
Total	**0.6163**	**5.5283**	**7.2848**	**0.0119**	**0.0824**	**0.2668**	**0.3492**	**0.0125**	**0.2558**	**0.2682**		**1,139.8144**	**1,139.8144**	**0.2062**		**1,144.9684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0162	1.0899	0.2825	4.6800e-003	0.1400	6.6000e-003	0.1466	0.0384	6.3200e-003	0.0447		514.6700	514.6700	0.0283	0.0817	539.7327
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0850**	**1.1392**	**0.9468**	**6.5500e-003**	**0.3636**	**7.9400e-003**	**0.3715**	**0.0977**	**7.5600e-003**	**0.1052**		**704.1407**	**704.1407**	**0.0334**	**0.0867**	**730.8005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0321	0.0000	0.0321	4.8700e-003	0.0000	4.8700e-003			0.0000			0.0000
Off-Road	0.6163	5.5283	7.2848	0.0119		0.2668	0.2668		0.2558	0.2558	0.0000	1,139.8144	1,139.8144	0.2062		1,144.9684
Total	**0.6163**	**5.5283**	**7.2848**	**0.0119**	**0.0321**	**0.2668**	**0.2990**	**4.8700e-003**	**0.2558**	**0.2606**	**0.0000**	**1,139.8144**	**1,139.8144**	**0.2062**		**1,144.9684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0162	1.0899	0.2825	4.6800e-003	0.1400	6.6000e-003	0.1466	0.0384	6.3200e-003	0.0447		514.6700	514.6700	0.0283	0.0817	539.7327
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0850**	**1.1392**	**0.9468**	**6.5500e-003**	**0.3636**	**7.9400e-003**	**0.3715**	**0.0977**	**7.5600e-003**	**0.1052**		**704.1407**	**704.1407**	**0.0334**	**0.0867**	**730.8005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2651	0.0000	0.2651	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	0.4870	5.2497	5.0266	9.3700e-003		0.2320	0.2320		0.2135	0.2135		906.8947	906.8947	0.2933		914.2274
Total	**0.4870**	**5.2497**	**5.0266**	**9.3700e-003**	**0.2651**	**0.2320**	**0.4972**	**0.0286**	**0.2135**	**0.2421**		**906.8947**	**906.8947**	**0.2933**		**914.2274**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0688**	**0.0493**	**0.6644**	**1.8700e-003**	**0.2236**	**1.3400e-003**	**0.2249**	**0.0593**	**1.2400e-003**	**0.0605**		**189.4707**	**189.4707**	**5.1100e-003**	**4.9300e-003**	**191.0678**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1034	0.0000	0.1034	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	0.4870	5.2497	5.0266	9.3700e-003		0.2320	0.2320		0.2135	0.2135	0.0000	906.8947	906.8947	0.2933		914.2274
Total	**0.4870**	**5.2497**	**5.0266**	**9.3700e-003**	**0.1034**	**0.2320**	**0.3354**	**0.0112**	**0.2135**	**0.2246**	**0.0000**	**906.8947**	**906.8947**	**0.2933**		**914.2274**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0688**	**0.0493**	**0.6644**	**1.8700e-003**	**0.2236**	**1.3400e-003**	**0.2249**	**0.0593**	**1.2400e-003**	**0.0605**		**189.4707**	**189.4707**	**5.1100e-003**	**4.9300e-003**	**191.0678**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4803	5.6030	8.8631	0.0130		0.2194	0.2194		0.2018	0.2018		1,254.2073	1,254.2073	0.4056		1,264.3482
Total	**0.4803**	**5.6030**	**8.8631**	**0.0130**		**0.2194**	**0.2194**		**0.2018**	**0.2018**		**1,254.2073**	**1,254.2073**	**0.4056**		**1,264.3482**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5626	0.2147	2.6100e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		280.8684	280.8684	9.3500e-003	0.0404	293.1475
Worker	0.1032	0.0739	0.9966	2.8100e-003	0.3353	2.0200e-003	0.3374	0.0889	1.8600e-003	0.0908		284.2061	284.2061	7.6700e-003	7.4000e-003	286.6017
Total	**0.1187**	**0.6366**	**1.2113**	**5.4200e-003**	**0.4250**	**4.7400e-003**	**0.4297**	**0.1148**	**4.4600e-003**	**0.1192**		**565.0745**	**565.0745**	**0.0170**	**0.0478**	**579.7493**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4803	5.6030	8.8631	0.0130		0.2194	0.2194		0.2018	0.2018	0.0000	1,254.2073	1,254.2073	0.4056		1,264.3482
Total	**0.4803**	**5.6030**	**8.8631**	**0.0130**		**0.2194**	**0.2194**		**0.2018**	**0.2018**	**0.0000**	**1,254.2073**	**1,254.2073**	**0.4056**		**1,264.3482**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5626	0.2147	2.6100e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		280.8684	280.8684	9.3500e-003	0.0404	293.1475
Worker	0.1032	0.0739	0.9966	2.8100e-003	0.3353	2.0200e-003	0.3374	0.0889	1.8600e-003	0.0908		284.2061	284.2061	7.6700e-003	7.4000e-003	286.6017
Total	**0.1187**	**0.6366**	**1.2113**	**5.4200e-003**	**0.4250**	**4.7400e-003**	**0.4297**	**0.1148**	**4.4600e-003**	**0.1192**		**565.0745**	**565.0745**	**0.0170**	**0.0478**	**579.7493**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4613	5.3578	8.8743	0.0130		0.1963	0.1963		0.1806	0.1806		1,254.4225	1,254.4225	0.4057		1,264.5652
Total	**0.4613**	**5.3578**	**8.8743**	**0.0130**		**0.1963**	**0.1963**		**0.1806**	**0.1806**		**1,254.4225**	**1,254.4225**	**0.4057**		**1,264.5652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0151	0.5638	0.2102	2.5700e-003	0.0897	2.7400e-003	0.0924	0.0258	2.6200e-003	0.0284		276.6601	276.6601	9.3900e-003	0.0399	288.7713
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.1115**	**0.6297**	**1.1371**	**5.3000e-003**	**0.4250**	**4.6700e-003**	**0.4297**	**0.1148**	**4.4000e-003**	**0.1192**		**552.8370**	**552.8370**	**0.0163**	**0.0467**	**567.1707**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4613	5.3578	8.8743	0.0130		0.1963	0.1963		0.1806	0.1806	0.0000	1,254.4225	1,254.4225	0.4057		1,264.5652
Total	**0.4613**	**5.3578**	**8.8743**	**0.0130**		**0.1963**	**0.1963**		**0.1806**	**0.1806**	**0.0000**	**1,254.4225**	**1,254.4225**	**0.4057**		**1,264.5652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0151	0.5638	0.2102	2.5700e-003	0.0897	2.7400e-003	0.0924	0.0258	2.6200e-003	0.0284		276.6601	276.6601	9.3900e-003	0.0399	288.7713
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.1115**	**0.6297**	**1.1371**	**5.3000e-003**	**0.4250**	**4.6700e-003**	**0.4297**	**0.1148**	**4.4000e-003**	**0.1192**		**552.8370**	**552.8370**	**0.0163**	**0.0467**	**567.1707**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3763	3.4102	4.6127	7.4800e-003		0.1632	0.1632		0.1519	0.1519		696.4189	696.4189	0.2086		701.6338
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3763**	**3.4102**	**4.6127**	**7.4800e-003**		**0.1632**	**0.1632**		**0.1519**	**0.1519**		**696.4189**	**696.4189**	**0.2086**		**701.6338**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-003	0.3222	0.1201	1.4700e-003	0.0512	1.5600e-003	0.0528	0.0148	1.5000e-003	0.0163		158.0915	158.0915	5.3600e-003	0.0228	165.0122
Worker	0.0321	0.0220	0.3090	9.1000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		92.0590	92.0590	2.3200e-003	2.2900e-003	92.7998
Total	**0.0407**	**0.3441**	**0.4291**	**2.3800e-003**	**0.1630**	**2.2000e-003**	**0.1652**	**0.0444**	**2.0900e-003**	**0.0465**		**250.1504**	**250.1504**	**7.6800e-003**	**0.0251**	**257.8120**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3763	3.4102	4.6127	7.4800e-003		0.1632	0.1632		0.1519	0.1519	0.0000	696.4189	696.4189	0.2086		701.6338
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3763**	**3.4102**	**4.6127**	**7.4800e-003**		**0.1632**	**0.1632**		**0.1519**	**0.1519**	**0.0000**	**696.4189**	**696.4189**	**0.2086**		**701.6338**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-003	0.3222	0.1201	1.4700e-003	0.0512	1.5600e-003	0.0528	0.0148	1.5000e-003	0.0163		158.0915	158.0915	5.3600e-003	0.0228	165.0122
Worker	0.0321	0.0220	0.3090	9.1000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		92.0590	92.0590	2.3200e-003	2.2900e-003	92.7998
Total	**0.0407**	**0.3441**	**0.4291**	**2.3800e-003**	**0.1630**	**2.2000e-003**	**0.1652**	**0.0444**	**2.0900e-003**	**0.0465**		**250.1504**	**250.1504**	**7.6800e-003**	**0.0251**	**257.8120**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.9756					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2067	1.6135	2.6297	4.2300e-003		0.0678	0.0678		0.0672	0.0672		403.4129	403.4129	0.0553		404.7953
Total	**12.1823**	**1.6135**	**2.6297**	**4.2300e-003**		**0.0678**	**0.0678**		**0.0672**	**0.0672**		**403.4129**	**403.4129**	**0.0553**		**404.7953**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3000e-003	0.1611	0.0601	7.3000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.5000e-004	8.1300e-003		79.0457	79.0457	2.6800e-003	0.0114	82.5061
Worker	0.0321	0.0220	0.3090	9.1000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		92.0590	92.0590	2.3200e-003	2.2900e-003	92.7998
Total	**0.0364**	**0.1831**	**0.3690**	**1.6400e-003**	**0.1374**	**1.4200e-003**	**0.1388**	**0.0370**	**1.3400e-003**	**0.0384**		**171.1047**	**171.1047**	**5.0000e-003**	**0.0137**	**175.3059**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.9756					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2067	1.6135	2.6297	4.2300e-003		0.0678	0.0678		0.0672	0.0672	0.0000	403.4129	403.4129	0.0553		404.7953
Total	**12.1823**	**1.6135**	**2.6297**	**4.2300e-003**		**0.0678**	**0.0678**		**0.0672**	**0.0672**	**0.0000**	**403.4129**	**403.4129**	**0.0553**		**404.7953**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3000e-003	0.1611	0.0601	7.3000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.5000e-004	8.1300e-003		79.0457	79.0457	2.6800e-003	0.0114	82.5061
Worker	0.0321	0.0220	0.3090	9.1000e-004	0.1118	6.4000e-004	0.1124	0.0296	5.9000e-004	0.0302		92.0590	92.0590	2.3200e-003	2.2900e-003	92.7998
Total	**0.0364**	**0.1831**	**0.3690**	**1.6400e-003**	**0.1374**	**1.4200e-003**	**0.1388**	**0.0370**	**1.3400e-003**	**0.0384**		**171.1047**	**171.1047**	**5.0000e-003**	**0.0137**	**175.3059**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6108	0.6832	6.2236	0.0136	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,389.4693	1,389.4693	0.0965	0.0604	1,409.8870
Unmitigated	0.6108	0.6832	6.2236	0.0136	1.4877	0.0101	1.4978	0.3963	9.3600e-003	0.4057		1,389.4693	1,389.4693	0.0965	0.0604	1,409.8870

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	205.04	0.00	0.00	504,749	504,749
Total	205.04	0.00	0.00	504,749	504,749

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
NaturalGas Unmitigated	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	547.362	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Total		**5.9000e-003**	**0.0537**	**0.0451**	**3.2000e-004**		**4.0800e-003**	**4.0800e-003**		**4.0800e-003**	**4.0800e-003**		**64.3956**	**64.3956**	**1.2300e-003**	**1.1800e-003**	**64.7782**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.547362	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3956	64.3956	1.2300e-003	1.1800e-003	64.7782
Total		**5.9000e-003**	**0.0537**	**0.0451**	**3.2000e-004**		**4.0800e-003**	**4.0800e-003**		**4.0800e-003**	**4.0800e-003**		**64.3956**	**64.3956**	**1.2300e-003**	**1.1800e-003**	**64.7782**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Unmitigated	0.4331	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0492					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Total	**0.4331**	**2.0000e-005**	**1.9800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.2400e-003**	**4.2400e-003**	**1.0000e-005**		**4.5200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0492					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.2400e-003	4.2400e-003	1.0000e-005		4.5200e-003
Total	**0.4331**	**2.0000e-005**	**1.9800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.2400e-003**	**4.2400e-003**	**1.0000e-005**		**4.5200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish School and Church - Phase 2

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	63.00	Space	0.57	25,200.00	0
Health Club	9.41	1000sqft	0.22	9,410.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Schedule provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Construction equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Trips and VMT - Project construction trips provided by applicant.

Demolition -

Grading -

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating -

Vehicle Trips - Gym facility will not generate additional vehicle trips.

Area Coating -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	NumDays	100.00	125.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	9/20/2024	10/4/2024
tblConstructionPhase	PhaseEndDate	9/23/2024	10/25/2024
tblConstructionPhase	PhaseEndDate	2/10/2025	4/25/2025
tblConstructionPhase	PhaseEndDate	2/17/2025	4/25/2025
tblConstructionPhase	PhaseEndDate	2/24/2025	4/25/2025
tblConstructionPhase	PhaseStartDate	9/21/2024	10/7/2024
tblConstructionPhase	PhaseStartDate	9/24/2024	11/4/2024
tblConstructionPhase	PhaseStartDate	2/11/2025	4/7/2025
tblConstructionPhase	PhaseStartDate	2/18/2025	4/7/2025
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	HaulingTripNumber	60.00	240.00
tblTripsAndVMT	VendorTripNumber	6.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	40.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	WD_TR	32.93	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.7501	7.4033	10.9803	0.0227	1.1976	0.2682	1.4658	0.2453	0.2560	0.5012	0.0000	2,286.7678	2,286.7678	0.4487	0.1272	2,331.8183
2025	7.5977	11.2116	18.8987	0.0357	0.8372	0.3959	1.2331	0.2258	0.3702	0.5961	0.0000	3,496.8764	3,496.8764	0.7236	0.0846	3,540.1682
Maximum	**7.5977**	**11.2116**	**18.8987**	**0.0357**	**1.1976**	**0.3959**	**1.4658**	**0.2453**	**0.3702**	**0.5961**	**0.0000**	**3,496.8764**	**3,496.8764**	**0.7236**	**0.1272**	**3,540.1682**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.7501	7.4033	10.9803	0.0227	0.7997	0.2682	1.0679	0.1850	0.2560	0.4410	0.0000	2,286.7678	2,286.7678	0.4487	0.1272	2,331.8183
2025	7.5977	11.2116	18.8987	0.0357	0.8372	0.3959	1.2331	0.2258	0.3702	0.5961	0.0000	3,496.8764	3,496.8764	0.7236	0.0846	3,540.1682
Maximum	**7.5977**	**11.2116**	**18.8987**	**0.0357**	**0.8372**	**0.3959**	**1.2331**	**0.2258**	**0.3702**	**0.5961**	**0.0000**	**3,496.8764**	**3,496.8764**	**0.7236**	**0.1272**	**3,540.1682**

Holy Innocents Parish School and Church - Phase 2 - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	19.55	0.00	14.74	12.79	0.00	5.49	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Energy	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2267**	**0.0455**	**0.0455**	**2.7000e-004**	**0.0000**	**3.4800e-003**	**3.4800e-003**	**0.0000**	**3.4800e-003**	**3.4800e-003**		**54.4892**	**54.4892**	**1.0800e-003**	**1.0000e-003**	**54.8140**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Energy	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2267**	**0.0455**	**0.0455**	**2.7000e-004**	**0.0000**	**3.4800e-003**	**3.4800e-003**	**0.0000**	**3.4800e-003**	**3.4800e-003**		**54.4892**	**54.4892**	**1.0800e-003**	**1.0000e-003**	**54.8140**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/9/2024	10/4/2024	5	20	
2	Site Preparation	Site Preparation	10/7/2024	10/25/2024	5	15	
3	Building Construction	Building Construction	11/4/2024	4/25/2025	5	125	
4	Paving	Paving	4/7/2025	4/25/2025	5	15	
5	Architectural Coating	Architectural Coating	4/7/2025	4/25/2025	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 14,115; Non-Residential Outdoor: 4,705; Striped Parking Area: 1,512 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	2.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	30.00	0.00	240.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	40.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6522	0.0000	0.6522	0.0988	0.0000	0.0988			0.0000			0.0000
Off-Road	0.6348	5.7737	7.5541	0.0129		0.2563	0.2563		0.2447	0.2447		1,234.9775	1,234.9775	0.2359		1,240.8748
Total	**0.6348**	**5.7737**	**7.5541**	**0.0129**	**0.6522**	**0.2563**	**0.9085**	**0.0988**	**0.2447**	**0.3434**		**1,234.9775**	**1,234.9775**	**0.2359**		**1,240.8748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0259	1.5699	0.4253	6.9100e-003	0.2101	9.9600e-003	0.2200	0.0576	9.5300e-003	0.0671		760.2713	760.2713	0.0429	0.1208	797.3345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.1153**	**1.6296**	**1.4328**	**9.7900e-003**	**0.5454**	**0.0119**	**0.5573**	**0.1465**	**0.0113**	**0.1578**		**1,051.7904**	**1,051.7904**	**0.0497**	**0.1272**	**1,090.9435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2544	0.0000	0.2544	0.0385	0.0000	0.0385			0.0000			0.0000
Off-Road	0.6348	5.7737	7.5541	0.0129		0.2563	0.2563		0.2447	0.2447	0.0000	1,234.9775	1,234.9775	0.2359		1,240.8748
Total	**0.6348**	**5.7737**	**7.5541**	**0.0129**	**0.2544**	**0.2563**	**0.5107**	**0.0385**	**0.2447**	**0.2832**	**0.0000**	**1,234.9775**	**1,234.9775**	**0.2359**		**1,240.8748**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0259	1.5699	0.4253	6.9100e-003	0.2101	9.9600e-003	0.2200	0.0576	9.5300e-003	0.0671		760.2713	760.2713	0.0429	0.1208	797.3345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.1153**	**1.6296**	**1.4328**	**9.7900e-003**	**0.5454**	**0.0119**	**0.5573**	**0.1465**	**0.0113**	**0.1578**		**1,051.7904**	**1,051.7904**	**0.0497**	**0.1272**	**1,090.9435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2651	0.0000	0.2651	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	0.4999	5.2706	5.5725	0.0102		0.2251	0.2251		0.2071	0.2071		982.8589	982.8589	0.3179		990.8058
Total	**0.4999**	**5.2706**	**5.5725**	**0.0102**	**0.2651**	**0.2251**	**0.4902**	**0.0286**	**0.2071**	**0.2357**		**982.8589**	**982.8589**	**0.3179**		**990.8058**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.0895**	**0.0597**	**1.0075**	**2.8800e-003**	**0.3353**	**1.9300e-003**	**0.3373**	**0.0889**	**1.7800e-003**	**0.0907**		**291.5190**	**291.5190**	**6.8400e-003**	**6.4400e-003**	**293.6089**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1034	0.0000	0.1034	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	0.4999	5.2706	5.5725	0.0102		0.2251	0.2251		0.2071	0.2071	0.0000	982.8589	982.8589	0.3179		990.8058
Total	**0.4999**	**5.2706**	**5.5725**	**0.0102**	**0.1034**	**0.2251**	**0.3285**	**0.0112**	**0.2071**	**0.2182**	**0.0000**	**982.8589**	**982.8589**	**0.3179**		**990.8058**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.0895**	**0.0597**	**1.0075**	**2.8800e-003**	**0.3353**	**1.9300e-003**	**0.3373**	**0.0889**	**1.7800e-003**	**0.0907**		**291.5190**	**291.5190**	**6.8400e-003**	**6.4400e-003**	**293.6089**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4973	5.7199	9.4332	0.0137		0.2129	0.2129		0.1959	0.1959		1,329.8642	1,329.8642	0.4301		1,340.6168
Total	**0.4973**	**5.7199**	**9.4332**	**0.0137**		**0.2129**	**0.2129**		**0.1959**	**0.1959**		**1,329.8642**	**1,329.8642**	**0.4301**		**1,340.6168**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5385	0.2038	2.5600e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		276.1845	276.1845	9.4300e-003	0.0398	288.2656
Worker	0.1193	0.0797	1.3433	3.8500e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		388.6920	388.6920	9.1300e-003	8.5900e-003	391.4786
Total	**0.1349**	**0.6181**	**1.5471**	**6.4100e-003**	**0.5368**	**5.2900e-003**	**0.5421**	**0.1444**	**4.9700e-003**	**0.1494**		**664.8765**	**664.8765**	**0.0186**	**0.0483**	**679.7442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4973	5.7199	9.4332	0.0137		0.2129	0.2129		0.1959	0.1959	0.0000	1,329.8642	1,329.8642	0.4301		1,340.6168
Total	**0.4973**	**5.7199**	**9.4332**	**0.0137**		**0.2129**	**0.2129**		**0.1959**	**0.1959**	**0.0000**	**1,329.8642**	**1,329.8642**	**0.4301**		**1,340.6168**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5385	0.2038	2.5600e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		276.1845	276.1845	9.4300e-003	0.0398	288.2656
Worker	0.1193	0.0797	1.3433	3.8500e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		388.6920	388.6920	9.1300e-003	8.5900e-003	391.4786
Total	**0.1349**	**0.6181**	**1.5471**	**6.4100e-003**	**0.5368**	**5.2900e-003**	**0.5421**	**0.1444**	**4.9700e-003**	**0.1494**		**664.8765**	**664.8765**	**0.0186**	**0.0483**	**679.7442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4637	5.3731	9.4137	0.0138		0.1791	0.1791		0.1648	0.1648		1,330.4097	1,330.4097	0.4303		1,341.1668
Total	**0.4637**	**5.3731**	**9.4137**	**0.0138**		**0.1791**	**0.1791**		**0.1648**	**0.1648**		**1,330.4097**	**1,330.4097**	**0.4303**		**1,341.1668**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0152	0.5359	0.2000	2.5200e-003	0.0897	2.7300e-003	0.0924	0.0258	2.6100e-003	0.0284		271.2120	271.2120	9.5000e-003	0.0391	283.0899
Worker	0.1115	0.0715	1.2493	3.7100e-003	0.4471	2.4500e-003	0.4496	0.1186	2.2600e-003	0.1208		375.4510	375.4510	8.2300e-003	8.0200e-003	378.0462
Total	**0.1267**	**0.6074**	**1.4493**	**6.2300e-003**	**0.5368**	**5.1800e-003**	**0.5420**	**0.1444**	**4.8700e-003**	**0.1493**		**646.6630**	**646.6630**	**0.0177**	**0.0471**	**661.1361**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4637	5.3731	9.4137	0.0138		0.1791	0.1791		0.1648	0.1648	0.0000	1,330.4097	1,330.4097	0.4303		1,341.1668
Total	**0.4637**	**5.3731**	**9.4137**	**0.0138**		**0.1791**	**0.1791**		**0.1648**	**0.1648**	**0.0000**	**1,330.4097**	**1,330.4097**	**0.4303**		**1,341.1668**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0152	0.5359	0.2000	2.5200e-003	0.0897	2.7300e-003	0.0924	0.0258	2.6100e-003	0.0284		271.2120	271.2120	9.5000e-003	0.0391	283.0899
Worker	0.1115	0.0715	1.2493	3.7100e-003	0.4471	2.4500e-003	0.4496	0.1186	2.2600e-003	0.1208		375.4510	375.4510	8.2300e-003	8.0200e-003	378.0462
Total	**0.1267**	**0.6074**	**1.4493**	**6.2300e-003**	**0.5368**	**5.1800e-003**	**0.5420**	**0.1444**	**4.8700e-003**	**0.1493**		**646.6630**	**646.6630**	**0.0177**	**0.0471**	**661.1361**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396		696.1978	696.1978	0.2085		701.4109
Paving	0.0996					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4596**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**		**696.1978**	**696.1978**	**0.2085**		**701.4109**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6800e-003	0.3062	0.1143	1.4400e-003	0.0512	1.5600e-003	0.0528	0.0148	1.4900e-003	0.0163		154.9783	154.9783	5.4300e-003	0.0223	161.7656
Worker	0.0279	0.0179	0.3123	9.3000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		93.8627	93.8627	2.0600e-003	2.0000e-003	94.5116
Total	**0.0366**	**0.3241**	**0.4266**	**2.3700e-003**	**0.1630**	**2.1700e-003**	**0.1652**	**0.0444**	**2.0500e-003**	**0.0465**		**248.8411**	**248.8411**	**7.4900e-003**	**0.0243**	**256.2772**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396	0.0000	696.1978	696.1978	0.2085		701.4109
Paving	0.0996					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4596**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**	**0.0000**	**696.1978**	**696.1978**	**0.2085**		**701.4109**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6800e-003	0.3062	0.1143	1.4400e-003	0.0512	1.5600e-003	0.0528	0.0148	1.4900e-003	0.0163		154.9783	154.9783	5.4300e-003	0.0223	161.7656
Worker	0.0279	0.0179	0.3123	9.3000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		93.8627	93.8627	2.0600e-003	2.0000e-003	94.5116
Total	**0.0366**	**0.3241**	**0.4266**	**2.3700e-003**	**0.1630**	**2.1700e-003**	**0.1652**	**0.0444**	**2.0500e-003**	**0.0465**		**248.8411**	**248.8411**	**7.4900e-003**	**0.0243**	**256.2772**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.2826					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577		403.4129	403.4129	0.0548		404.7829
Total	**6.4790**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**		**403.4129**	**403.4129**	**0.0548**		**404.7829**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3400e-003	0.1531	0.0571	7.2000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.5000e-004	8.1200e-003		77.4892	77.4892	2.7100e-003	0.0112	80.8828
Worker	0.0279	0.0179	0.3123	9.3000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		93.8627	93.8627	2.0600e-003	2.0000e-003	94.5116
Total	**0.0322**	**0.1710**	**0.3695**	**1.6500e-003**	**0.1374**	**1.3900e-003**	**0.1388**	**0.0370**	**1.3100e-003**	**0.0383**		**171.3519**	**171.3519**	**4.7700e-003**	**0.0132**	**175.3944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.2826					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577	0.0000	403.4129	403.4129	0.0548		404.7829
Total	**6.4790**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**	**0.0000**	**403.4129**	**403.4129**	**0.0548**		**404.7829**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3400e-003	0.1531	0.0571	7.2000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.5000e-004	8.1200e-003		77.4892	77.4892	2.7100e-003	0.0112	80.8828
Worker	0.0279	0.0179	0.3123	9.3000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		93.8627	93.8627	2.0600e-003	2.0000e-003	94.5116
Total	**0.0322**	**0.1710**	**0.3695**	**1.6500e-003**	**0.1374**	**1.3900e-003**	**0.1388**	**0.0370**	**1.3100e-003**	**0.0383**		**171.3519**	**171.3519**	**4.7700e-003**	**0.0132**	**175.3944**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
NaturalGas Unmitigated	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	463.024	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.9900e-003**	**0.0454**	**0.0381**	**2.7000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**		**54.4734**	**54.4734**	**1.0400e-003**	**1.0000e-003**	**54.7971**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	0.463024	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.9900e-003**	**0.0454**	**0.0381**	**2.7000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**		**54.4734**	**54.4734**	**1.0400e-003**	**1.0000e-003**	**54.7971**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Unmitigated	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.8000e-004	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Total	**0.2217**	**7.0000e-005**	**7.3700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0159**	**0.0159**	**4.0000e-005**		**0.0169**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.8000e-004	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Total	**0.2217**	**7.0000e-005**	**7.3700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0159**	**0.0159**	**4.0000e-005**		**0.0169**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish School and Church - Phase 2

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	63.00	Space	0.57	25,200.00	0
Health Club	9.41	1000sqft	0.22	9,410.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Schedule provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Construction equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Trips and VMT - Project construction trips provided by applicant.

Demolition -

Grading -

Holy Innocents Parish School and Church - Phase 2 - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating -

Vehicle Trips - Gym facility will not generate additional vehicle trips.

Area Coating -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	NumDays	100.00	125.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	9/20/2024	10/4/2024
tblConstructionPhase	PhaseEndDate	9/23/2024	10/25/2024
tblConstructionPhase	PhaseEndDate	2/10/2025	4/25/2025
tblConstructionPhase	PhaseEndDate	2/17/2025	4/25/2025
tblConstructionPhase	PhaseEndDate	2/24/2025	4/25/2025
tblConstructionPhase	PhaseStartDate	9/21/2024	10/7/2024
tblConstructionPhase	PhaseStartDate	9/24/2024	11/4/2024
tblConstructionPhase	PhaseStartDate	2/11/2025	4/7/2025
tblConstructionPhase	PhaseStartDate	2/18/2025	4/7/2025
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	HaulingTripNumber	60.00	240.00
tblTripsAndVMT	VendorTripNumber	6.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	40.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	WD_TR	32.93	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.7554	7.4788	10.8792	0.0225	1.1976	0.2682	1.4658	0.2453	0.2560	0.5013	0.0000	2,272.2381	2,272.2381	0.4488	0.1278	2,317.4583
2025	7.6103	11.2696	18.7620	0.0354	0.8372	0.3959	1.2331	0.2258	0.3703	0.5961	0.0000	3,468.1860	3,468.1860	0.7237	0.0856	3,511.7790
Maximum	**7.6103**	**11.2696**	**18.7620**	**0.0354**	**1.1976**	**0.3959**	**1.4658**	**0.2453**	**0.3703**	**0.5961**	**0.0000**	**3,468.1860**	**3,468.1860**	**0.7237**	**0.1278**	**3,511.7790**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.7554	7.4788	10.8792	0.0225	0.7997	0.2682	1.0680	0.1850	0.2560	0.4410	0.0000	2,272.2381	2,272.2381	0.4488	0.1278	2,317.4583
2025	7.6103	11.2696	18.7620	0.0354	0.8372	0.3959	1.2331	0.2258	0.3703	0.5961	0.0000	3,468.1860	3,468.1860	0.7237	0.0856	3,511.7790
Maximum	**7.6103**	**11.2696**	**18.7620**	**0.0354**	**0.8372**	**0.3959**	**1.2331**	**0.2258**	**0.3703**	**0.5961**	**0.0000**	**3,468.1860**	**3,468.1860**	**0.7237**	**0.1278**	**3,511.7790**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	19.55	0.00	14.74	12.79	0.00	5.49	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Energy	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2267**	**0.0455**	**0.0455**	**2.7000e-004**	**0.0000**	**3.4800e-003**	**3.4800e-003**	**0.0000**	**3.4800e-003**	**3.4800e-003**		**54.4892**	**54.4892**	**1.0800e-003**	**1.0000e-003**	**54.8140**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Energy	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2267**	**0.0455**	**0.0455**	**2.7000e-004**	**0.0000**	**3.4800e-003**	**3.4800e-003**	**0.0000**	**3.4800e-003**	**3.4800e-003**		**54.4892**	**54.4892**	**1.0800e-003**	**1.0000e-003**	**54.8140**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/9/2024	10/4/2024	5	20	
2	Site Preparation	Site Preparation	10/7/2024	10/25/2024	5	15	
3	Building Construction	Building Construction	11/4/2024	4/25/2025	5	125	
4	Paving	Paving	4/7/2025	4/25/2025	5	15	
5	Architectural Coating	Architectural Coating	4/7/2025	4/25/2025	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 14,115; Non-Residential Outdoor: 4,705; Striped Parking Area: 1,512 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	2.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	30.00	0.00	240.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	40.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6522	0.0000	0.6522	0.0988	0.0000	0.0988			0.0000			0.0000
Off-Road	0.6348	5.7737	7.5541	0.0129		0.2563	0.2563		0.2447	0.2447		1,234.9775	1,234.9775	0.2359		1,240.8748
Total	**0.6348**	**5.7737**	**7.5541**	**0.0129**	**0.6522**	**0.2563**	**0.9085**	**0.0988**	**0.2447**	**0.3434**		**1,234.9775**	**1,234.9775**	**0.2359**		**1,240.8748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0242	1.6392	0.4310	6.9200e-003	0.2101	9.9800e-003	0.2200	0.0576	9.5500e-003	0.0671		761.0838	761.0838	0.0428	0.1209	798.1841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.1206**	**1.7052**	**1.3579**	**9.6500e-003**	**0.5454**	**0.0119**	**0.5573**	**0.1465**	**0.0113**	**0.1579**		**1,037.2607**	**1,037.2607**	**0.0498**	**0.1278**	**1,076.5835**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2544	0.0000	0.2544	0.0385	0.0000	0.0385			0.0000			0.0000
Off-Road	0.6348	5.7737	7.5541	0.0129		0.2563	0.2563		0.2447	0.2447	0.0000	1,234.9775	1,234.9775	0.2359		1,240.8748
Total	**0.6348**	**5.7737**	**7.5541**	**0.0129**	**0.2544**	**0.2563**	**0.5107**	**0.0385**	**0.2447**	**0.2832**	**0.0000**	**1,234.9775**	**1,234.9775**	**0.2359**		**1,240.8748**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0242	1.6392	0.4310	6.9200e-003	0.2101	9.9800e-003	0.2200	0.0576	9.5500e-003	0.0671		761.0838	761.0838	0.0428	0.1209	798.1841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.1206**	**1.7052**	**1.3579**	**9.6500e-003**	**0.5454**	**0.0119**	**0.5573**	**0.1465**	**0.0113**	**0.1579**		**1,037.2607**	**1,037.2607**	**0.0498**	**0.1278**	**1,076.5835**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2651	0.0000	0.2651	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	0.4999	5.2706	5.5725	0.0102		0.2251	0.2251		0.2071	0.2071		982.8589	982.8589	0.3179		990.8058
Total	**0.4999**	**5.2706**	**5.5725**	**0.0102**	**0.2651**	**0.2251**	**0.4902**	**0.0286**	**0.2071**	**0.2357**		**982.8589**	**982.8589**	**0.3179**		**990.8058**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.0964**	**0.0660**	**0.9269**	**2.7300e-003**	**0.3353**	**1.9300e-003**	**0.3373**	**0.0889**	**1.7800e-003**	**0.0907**		**276.1769**	**276.1769**	**6.9500e-003**	**6.8800e-003**	**278.3994**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1034	0.0000	0.1034	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	0.4999	5.2706	5.5725	0.0102		0.2251	0.2251		0.2071	0.2071	0.0000	982.8589	982.8589	0.3179		990.8058
Total	**0.4999**	**5.2706**	**5.5725**	**0.0102**	**0.1034**	**0.2251**	**0.3285**	**0.0112**	**0.2071**	**0.2182**	**0.0000**	**982.8589**	**982.8589**	**0.3179**		**990.8058**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.0964**	**0.0660**	**0.9269**	**2.7300e-003**	**0.3353**	**1.9300e-003**	**0.3373**	**0.0889**	**1.7800e-003**	**0.0907**		**276.1769**	**276.1769**	**6.9500e-003**	**6.8800e-003**	**278.3994**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4973	5.7199	9.4332	0.0137		0.2129	0.2129		0.1959	0.1959		1,329.8642	1,329.8642	0.4301		1,340.6168
Total	**0.4973**	**5.7199**	**9.4332**	**0.0137**		**0.2129**	**0.2129**		**0.1959**	**0.1959**		**1,329.8642**	**1,329.8642**	**0.4301**		**1,340.6168**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0151	0.5638	0.2102	2.5700e-003	0.0897	2.7400e-003	0.0924	0.0258	2.6200e-003	0.0284		276.6601	276.6601	9.3900e-003	0.0399	288.7713
Worker	0.1286	0.0880	1.2358	3.6400e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		368.2358	368.2358	9.2600e-003	9.1700e-003	371.1992
Total	**0.1436**	**0.6517**	**1.4460**	**6.2100e-003**	**0.5368**	**5.3100e-003**	**0.5421**	**0.1444**	**4.9900e-003**	**0.1494**		**644.8959**	**644.8959**	**0.0187**	**0.0490**	**659.9705**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4973	5.7199	9.4332	0.0137		0.2129	0.2129		0.1959	0.1959	0.0000	1,329.8642	1,329.8642	0.4301		1,340.6168
Total	**0.4973**	**5.7199**	**9.4332**	**0.0137**		**0.2129**	**0.2129**		**0.1959**	**0.1959**	**0.0000**	**1,329.8642**	**1,329.8642**	**0.4301**		**1,340.6168**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0151	0.5638	0.2102	2.5700e-003	0.0897	2.7400e-003	0.0924	0.0258	2.6200e-003	0.0284		276.6601	276.6601	9.3900e-003	0.0399	288.7713
Worker	0.1286	0.0880	1.2358	3.6400e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		368.2358	368.2358	9.2600e-003	9.1700e-003	371.1992
Total	**0.1436**	**0.6517**	**1.4460**	**6.2100e-003**	**0.5368**	**5.3100e-003**	**0.5421**	**0.1444**	**4.9900e-003**	**0.1494**		**644.8959**	**644.8959**	**0.0187**	**0.0490**	**659.9705**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4637	5.3731	9.4137	0.0138		0.1791	0.1791		0.1648	0.1648		1,330.4097	1,330.4097	0.4303		1,341.1668
Total	**0.4637**	**5.3731**	**9.4137**	**0.0138**		**0.1791**	**0.1791**		**0.1648**	**0.1648**		**1,330.4097**	**1,330.4097**	**0.4303**		**1,341.1668**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0146	0.5611	0.2064	2.5200e-003	0.0897	2.7400e-003	0.0924	0.0258	2.6200e-003	0.0285		271.6875	271.6875	9.4600e-003	0.0392	283.5946
Worker	0.1206	0.0790	1.1502	3.5200e-003	0.4471	2.4500e-003	0.4496	0.1186	2.2600e-003	0.1208		355.7354	355.7354	8.3600e-003	8.5600e-003	358.4953
Total	**0.1352**	**0.6401**	**1.3566**	**6.0400e-003**	**0.5368**	**5.1900e-003**	**0.5420**	**0.1444**	**4.8800e-003**	**0.1493**		**627.4229**	**627.4229**	**0.0178**	**0.0477**	**642.0898**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4637	5.3731	9.4137	0.0138		0.1791	0.1791		0.1648	0.1648	0.0000	1,330.4097	1,330.4097	0.4303		1,341.1668
Total	**0.4637**	**5.3731**	**9.4137**	**0.0138**		**0.1791**	**0.1791**		**0.1648**	**0.1648**	**0.0000**	**1,330.4097**	**1,330.4097**	**0.4303**		**1,341.1668**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0146	0.5611	0.2064	2.5200e-003	0.0897	2.7400e-003	0.0924	0.0258	2.6200e-003	0.0285		271.6875	271.6875	9.4600e-003	0.0392	283.5946
Worker	0.1206	0.0790	1.1502	3.5200e-003	0.4471	2.4500e-003	0.4496	0.1186	2.2600e-003	0.1208		355.7354	355.7354	8.3600e-003	8.5600e-003	358.4953
Total	**0.1352**	**0.6401**	**1.3566**	**6.0400e-003**	**0.5368**	**5.1900e-003**	**0.5420**	**0.1444**	**4.8800e-003**	**0.1493**		**627.4229**	**627.4229**	**0.0178**	**0.0477**	**642.0898**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396		696.1978	696.1978	0.2085		701.4109
Paving	0.0996					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4596**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**		**696.1978**	**696.1978**	**0.2085**		**701.4109**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.3400e-003	0.3207	0.1179	1.4400e-003	0.0512	1.5700e-003	0.0528	0.0148	1.5000e-003	0.0163		155.2500	155.2500	5.4000e-003	0.0224	162.0540
Worker	0.0302	0.0197	0.2876	8.8000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		88.9339	88.9339	2.0900e-003	2.1400e-003	89.6238
Total	**0.0385**	**0.3404**	**0.4055**	**2.3200e-003**	**0.1630**	**2.1800e-003**	**0.1652**	**0.0444**	**2.0600e-003**	**0.0465**		**244.1839**	**244.1839**	**7.4900e-003**	**0.0245**	**251.6778**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396	0.0000	696.1978	696.1978	0.2085		701.4109
Paving	0.0996					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4596**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**	**0.0000**	**696.1978**	**696.1978**	**0.2085**		**701.4109**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.3400e-003	0.3207	0.1179	1.4400e-003	0.0512	1.5700e-003	0.0528	0.0148	1.5000e-003	0.0163		155.2500	155.2500	5.4000e-003	0.0224	162.0540
Worker	0.0302	0.0197	0.2876	8.8000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		88.9339	88.9339	2.0900e-003	2.1400e-003	89.6238
Total	**0.0385**	**0.3404**	**0.4055**	**2.3200e-003**	**0.1630**	**2.1800e-003**	**0.1652**	**0.0444**	**2.0600e-003**	**0.0465**		**244.1839**	**244.1839**	**7.4900e-003**	**0.0245**	**251.6778**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.2826					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577		403.4129	403.4129	0.0548		404.7829
Total	**6.4790**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**		**403.4129**	**403.4129**	**0.0548**		**404.7829**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1700e-003	0.1603	0.0590	7.2000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.5000e-004	8.1300e-003		77.6250	77.6250	2.7000e-003	0.0112	81.0270
Worker	0.0302	0.0197	0.2876	8.8000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		88.9339	88.9339	2.0900e-003	2.1400e-003	89.6238
Total	**0.0343**	**0.1801**	**0.3465**	**1.6000e-003**	**0.1374**	**1.3900e-003**	**0.1388**	**0.0370**	**1.3100e-003**	**0.0383**		**166.5589**	**166.5589**	**4.7900e-003**	**0.0133**	**170.6508**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.2826					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577	0.0000	403.4129	403.4129	0.0548		404.7829
Total	**6.4790**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**	**0.0000**	**403.4129**	**403.4129**	**0.0548**		**404.7829**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1700e-003	0.1603	0.0590	7.2000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.5000e-004	8.1300e-003		77.6250	77.6250	2.7000e-003	0.0112	81.0270
Worker	0.0302	0.0197	0.2876	8.8000e-004	0.1118	6.1000e-004	0.1124	0.0296	5.6000e-004	0.0302		88.9339	88.9339	2.0900e-003	2.1400e-003	89.6238
Total	**0.0343**	**0.1801**	**0.3465**	**1.6000e-003**	**0.1374**	**1.3900e-003**	**0.1388**	**0.0370**	**1.3100e-003**	**0.0383**		**166.5589**	**166.5589**	**4.7900e-003**	**0.0133**	**170.6508**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
NaturalGas Unmitigated	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	463.024	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.9900e-003**	**0.0454**	**0.0381**	**2.7000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**		**54.4734**	**54.4734**	**1.0400e-003**	**1.0000e-003**	**54.7971**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Health Club	0.463024	4.9900e-003	0.0454	0.0381	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003		54.4734	54.4734	1.0400e-003	1.0000e-003	54.7971
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.9900e-003**	**0.0454**	**0.0381**	**2.7000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**		**54.4734**	**54.4734**	**1.0400e-003**	**1.0000e-003**	**54.7971**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Unmitigated	0.2217	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.8000e-004	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Total	**0.2217**	**7.0000e-005**	**7.3700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0159**	**0.0159**	**4.0000e-005**		**0.0169**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.8000e-004	7.0000e-005	7.3700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0159	0.0159	4.0000e-005		0.0169
Total	**0.2217**	**7.0000e-005**	**7.3700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0159**	**0.0159**	**4.0000e-005**		**0.0169**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish Church and School - Phase 3

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.68	1000sqft	0.04	1,680.00	0
Place of Worship	19.53	1000sqft	0.45	19,532.00	0
Parking Lot	27.00	Space	0.24	10,800.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	3,433.00	3
Single Family Housing	1.00	Dwelling Unit	0.32	3,298.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 3 construction plans provided by applicant.

Construction Phase - Construction schedule provided by applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Construction equipment inventory provided by applicant.

Off-road Equipment -

Off-road Equipment - Construction equipment inventory provided by applicant.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - Construction trip schedule provided by applicant.

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - Operational phase vehicle trips provided by applicant.

Woodstoves - Project design plans indicate no hearths.

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	200.00	285.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	10.00	15.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1.70	0.00
tblFireplaces	NumberNoFireplace	0.20	0.00
tblFireplaces	NumberWood	0.10	0.00
tblLandUse	LandUseSquareFeet	19,530.00	19,532.00
tblLandUse	LandUseSquareFeet	1,800.00	3,433.00
tblLandUse	LandUseSquareFeet	1,800.00	3,298.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblTripsAndVMT	HaulingTripNumber	29.00	240.00
tblTripsAndVMT	VendorTripNumber	5.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	14.00	40.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	5.99	6.30
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	27.63	6.30
tblVehicleTrips	SU_TR	8.55	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	6.95	6.30
tblVehicleTrips	WD_TR	9.44	0.00
tblWoodstoves	NumberCatalytic	0.10	0.00
tblWoodstoves	NumberNoncatalytic	0.10	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.7620	7.5425	9.9982	0.0240	0.8551	0.2514	1.1066	0.1934	0.2391	0.4325	0.0000	2,414.6619	2,414.6619	0.3323	0.1247	2,460.1270
2026	0.5503	5.6363	10.2249	0.0190	0.6005	0.1872	0.7876	0.1444	0.1722	0.3015	0.0000	1,885.0896	1,885.0896	0.4229	0.0459	1,909.3445
2027	16.3422	5.6267	10.1566	0.0189	0.5368	0.1705	0.7073	0.1444	0.1569	0.3013	0.0000	1,869.7305	1,869.7305	0.4223	0.0448	1,893.6385
Maximum	**16.3422**	**7.5425**	**10.2249**	**0.0240**	**0.8551**	**0.2514**	**1.1066**	**0.1934**	**0.2391**	**0.4325**	**0.0000**	**2,414.6619**	**2,414.6619**	**0.4229**	**0.1247**	**2,460.1270**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.7620	7.5425	9.9982	0.0240	0.6662	0.2514	0.9176	0.1648	0.2391	0.4039	0.0000	2,414.6619	2,414.6619	0.3323	0.1247	2,460.1270
2026	0.5503	5.6363	10.2249	0.0190	0.5368	0.1872	0.7074	0.1444	0.1722	0.3015	0.0000	1,885.0896	1,885.0896	0.4229	0.0459	1,909.3445
2027	16.3422	5.6267	10.1566	0.0189	0.5368	0.1705	0.7073	0.1444	0.1569	0.3013	0.0000	1,869.7305	1,869.7305	0.4223	0.0448	1,893.6385
Maximum	**16.3422**	**7.5425**	**10.2249**	**0.0240**	**0.6662**	**0.2514**	**0.9176**	**0.1648**	**0.2391**	**0.4039**	**0.0000**	**2,414.6619**	**2,414.6619**	**0.4229**	**0.1247**	**2,460.1270**

Holy Innocents Parish Church and School - Phase 3 - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**12.68**	**0.00**	**10.35**	**5.93**	**0.00**	**2.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155
Energy	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873
Mobile	0.2775	0.2389	2.3807	5.0300e-003	0.5526	3.6400e-003	0.5562	0.1472	3.3800e-003	0.1506		513.3270	513.3270	0.0373	0.0225	520.9767
Total	**0.9186**	**0.3526**	**2.6390**	**5.7200e-003**	**0.5526**	**0.0131**	**0.5657**	**0.1472**	**0.0129**	**0.1601**	**0.0000**	**648.7192**	**648.7192**	**0.0402**	**0.0250**	**657.1794**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155
Energy	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873
Mobile	0.2775	0.2389	2.3807	5.0300e-003	0.5526	3.6400e-003	0.5562	0.1472	3.3800e-003	0.1506		513.3270	513.3270	0.0373	0.0225	520.9767
Total	**0.9186**	**0.3526**	**2.6390**	**5.7200e-003**	**0.5526**	**0.0131**	**0.5657**	**0.1472**	**0.0129**	**0.1601**	**0.0000**	**648.7192**	**648.7192**	**0.0402**	**0.0250**	**657.1794**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2025	12/26/2025	5	20	
2	Site Preparation	Site Preparation	1/5/2026	1/23/2026	5	15	
3	Building Construction	Building Construction	2/2/2026	3/5/2027	5	285	
4	Paving	Paving	3/8/2027	3/26/2027	5	15	
5	Architectural Coating	Architectural Coating	3/29/2027	4/16/2027	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.24

Residential Indoor: 13,630; Residential Outdoor: 4,543; Non-Residential Indoor: 31,818; Non-Residential Outdoor: 10,606; Striped Parking Area: 648 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	2.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	30.00	0.00	240.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	40.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3097	0.0000	0.3097	0.0469	0.0000	0.0469			0.0000			0.0000
Off-Road	0.6528	5.9289	8.6301	0.0145		0.2396	0.2396		0.2279	0.2279		1,386.3445	1,386.3445	0.2828		1,393.4136
Total	**0.6528**	**5.9289**	**8.6301**	**0.0145**	**0.3097**	**0.2396**	**0.5494**	**0.0469**	**0.2279**	**0.2748**		**1,386.3445**	**1,386.3445**	**0.2828**		**1,393.4136**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0256	1.5600	0.4311	6.7800e-003	0.2101	9.9700e-003	0.2200	0.0576	9.5400e-003	0.0671		746.7292	746.7292	0.0434	0.1187	783.1787
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0836	0.0537	0.9370	2.7900e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		281.5882	281.5882	6.1700e-003	6.0100e-003	283.5347
Total	**0.1092**	**1.6136**	**1.3681**	**9.5700e-003**	**0.5454**	**0.0118**	**0.5572**	**0.1465**	**0.0112**	**0.1578**		**1,028.3174**	**1,028.3174**	**0.0496**	**0.1247**	**1,066.7134**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1208	0.0000	0.1208	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	0.6528	5.9289	8.6301	0.0145		0.2396	0.2396		0.2279	0.2279	0.0000	1,386.3445	1,386.3445	0.2828		1,393.4136
Total	**0.6528**	**5.9289**	**8.6301**	**0.0145**	**0.1208**	**0.2396**	**0.3604**	**0.0183**	**0.2279**	**0.2462**	**0.0000**	**1,386.3445**	**1,386.3445**	**0.2828**		**1,393.4136**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0256	1.5600	0.4311	6.7800e-003	0.2101	9.9700e-003	0.2200	0.0576	9.5400e-003	0.0671		746.7292	746.7292	0.0434	0.1187	783.1787
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0836	0.0537	0.9370	2.7900e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		281.5882	281.5882	6.1700e-003	6.0100e-003	283.5347
Total	**0.1092**	**1.6136**	**1.3681**	**9.5700e-003**	**0.5454**	**0.0118**	**0.5572**	**0.1465**	**0.0112**	**0.1578**		**1,028.3174**	**1,028.3174**	**0.0496**	**0.1247**	**1,066.7134**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2651	0.0000	0.2651	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	0.4511	4.6490	5.5112	0.0102		0.1854	0.1854		0.1706	0.1706		983.2459	983.2459	0.3180		991.1960
Total	**0.4511**	**4.6490**	**5.5112**	**0.0102**	**0.2651**	**0.1854**	**0.4506**	**0.0286**	**0.1706**	**0.1992**		**983.2459**	**983.2459**	**0.3180**		**991.1960**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0786	0.0487	0.8786	2.7000e-003	0.3353	1.7400e-003	0.3371	0.0889	1.6000e-003	0.0905		273.0116	273.0116	5.6000e-003	5.6700e-003	274.8407
Total	**0.0786**	**0.0487**	**0.8786**	**2.7000e-003**	**0.3353**	**1.7400e-003**	**0.3371**	**0.0889**	**1.6000e-003**	**0.0905**		**273.0116**	**273.0116**	**5.6000e-003**	**5.6700e-003**	**274.8407**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1034	0.0000	0.1034	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	0.4511	4.6490	5.5112	0.0102		0.1854	0.1854		0.1706	0.1706	0.0000	983.2459	983.2459	0.3180		991.1960
Total	**0.4511**	**4.6490**	**5.5112**	**0.0102**	**0.1034**	**0.1854**	**0.2888**	**0.0112**	**0.1706**	**0.1818**	**0.0000**	**983.2459**	**983.2459**	**0.3180**		**991.1960**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0786	0.0487	0.8786	2.7000e-003	0.3353	1.7400e-003	0.3371	0.0889	1.6000e-003	0.0905		273.0116	273.0116	5.6000e-003	5.6700e-003	274.8407
Total	**0.0786**	**0.0487**	**0.8786**	**2.7000e-003**	**0.3353**	**1.7400e-003**	**0.3371**	**0.0889**	**1.6000e-003**	**0.0905**		**273.0116**	**273.0116**	**5.6000e-003**	**5.6700e-003**	**274.8407**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523		1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**		**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0148	0.5320	0.1972	2.4700e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		266.1784	266.1784	9.5600e-003	0.0384	277.8480
Worker	0.1048	0.0649	1.1715	3.6000e-003	0.4471	2.3200e-003	0.4494	0.1186	2.1400e-003	0.1207		364.0155	364.0155	7.4700e-003	7.5600e-003	366.4542
Total	**0.1196**	**0.5969**	**1.3687**	**6.0700e-003**	**0.5368**	**5.0400e-003**	**0.5418**	**0.1444**	**4.7400e-003**	**0.1491**		**630.1939**	**630.1939**	**0.0170**	**0.0459**	**644.3023**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523	0.0000	1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**	**0.0000**	**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0148	0.5320	0.1972	2.4700e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		266.1784	266.1784	9.5600e-003	0.0384	277.8480
Worker	0.1048	0.0649	1.1715	3.6000e-003	0.4471	2.3200e-003	0.4494	0.1186	2.1400e-003	0.1207		364.0155	364.0155	7.4700e-003	7.5600e-003	366.4542
Total	**0.1196**	**0.5969**	**1.3687**	**6.0700e-003**	**0.5368**	**5.0400e-003**	**0.5418**	**0.1444**	**4.7400e-003**	**0.1491**		**630.1939**	**630.1939**	**0.0170**	**0.0459**	**644.3023**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523		1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**		**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0145	0.5281	0.1949	2.4200e-003	0.0897	2.7100e-003	0.0924	0.0258	2.5900e-003	0.0284		260.9399	260.9399	9.5800e-003	0.0376	272.3939
Worker	0.0988	0.0593	1.1055	3.5000e-003	0.4471	2.1800e-003	0.4493	0.1186	2.0100e-003	0.1206		353.8948	353.8948	6.8200e-003	7.1700e-003	356.2024
Total	**0.1133**	**0.5874**	**1.3003**	**5.9200e-003**	**0.5368**	**4.8900e-003**	**0.5417**	**0.1444**	**4.6000e-003**	**0.1490**		**614.8347**	**614.8347**	**0.0164**	**0.0448**	**628.5962**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523	0.0000	1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**	**0.0000**	**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0145	0.5281	0.1949	2.4200e-003	0.0897	2.7100e-003	0.0924	0.0258	2.5900e-003	0.0284		260.9399	260.9399	9.5800e-003	0.0376	272.3939
Worker	0.0988	0.0593	1.1055	3.5000e-003	0.4471	2.1800e-003	0.4493	0.1186	2.0100e-003	0.1206		353.8948	353.8948	6.8200e-003	7.1700e-003	356.2024
Total	**0.1133**	**0.5874**	**1.3003**	**5.9200e-003**	**0.5368**	**4.8900e-003**	**0.5417**	**0.1444**	**4.6000e-003**	**0.1490**		**614.8347**	**614.8347**	**0.0164**	**0.0448**	**628.5962**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396		696.1978	696.1978	0.2085		701.4109
Paving	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4020**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**		**696.1978**	**696.1978**	**0.2085**		**701.4109**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.2700e-003	0.3017	0.1113	1.3800e-003	0.0513	1.5500e-003	0.0528	0.0148	1.4800e-003	0.0162		149.1085	149.1085	5.4800e-003	0.0215	155.6536
Worker	0.0247	0.0148	0.2764	8.8000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		88.4737	88.4737	1.7000e-003	1.7900e-003	89.0506
Total	**0.0330**	**0.3166**	**0.3877**	**2.2600e-003**	**0.1630**	**2.1000e-003**	**0.1651**	**0.0444**	**1.9800e-003**	**0.0464**		**237.5822**	**237.5822**	**7.1800e-003**	**0.0233**	**244.7042**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396	0.0000	696.1978	696.1978	0.2085		701.4109
Paving	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4020**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**	**0.0000**	**696.1978**	**696.1978**	**0.2085**		**701.4109**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.2700e-003	0.3017	0.1113	1.3800e-003	0.0513	1.5500e-003	0.0528	0.0148	1.4800e-003	0.0162		149.1085	149.1085	5.4800e-003	0.0215	155.6536
Worker	0.0247	0.0148	0.2764	8.8000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		88.4737	88.4737	1.7000e-003	1.7900e-003	89.0506
Total	**0.0330**	**0.3166**	**0.3877**	**2.2600e-003**	**0.1630**	**2.1000e-003**	**0.1651**	**0.0444**	**1.9800e-003**	**0.0464**		**237.5822**	**237.5822**	**7.1800e-003**	**0.0233**	**244.7042**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577		403.4129	403.4129	0.0548		404.7829
Total	**16.3134**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**		**403.4129**	**403.4129**	**0.0548**		**404.7829**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1400e-003	0.1509	0.0557	6.9000e-004	0.0256	7.7000e-004	0.0264	7.3800e-003	7.4000e-004	8.1200e-003		74.5543	74.5543	2.7400e-003	0.0108	77.8268
Worker	0.0247	0.0148	0.2764	8.8000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		88.4737	88.4737	1.7000e-003	1.7900e-003	89.0506
Total	**0.0288**	**0.1657**	**0.3320**	**1.5700e-003**	**0.1374**	**1.3200e-003**	**0.1387**	**0.0370**	**1.2400e-003**	**0.0383**		**163.0280**	**163.0280**	**4.4400e-003**	**0.0125**	**166.8774**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577	0.0000	403.4129	403.4129	0.0548		404.7829
Total	**16.3134**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**	**0.0000**	**403.4129**	**403.4129**	**0.0548**		**404.7829**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1400e-003	0.1509	0.0557	6.9000e-004	0.0256	7.7000e-004	0.0264	7.3800e-003	7.4000e-004	8.1200e-003		74.5543	74.5543	2.7400e-003	0.0108	77.8268
Worker	0.0247	0.0148	0.2764	8.8000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		88.4737	88.4737	1.7000e-003	1.7900e-003	89.0506
Total	**0.0288**	**0.1657**	**0.3320**	**1.5700e-003**	**0.1374**	**1.3200e-003**	**0.1387**	**0.0370**	**1.2400e-003**	**0.0383**		**163.0280**	**163.0280**	**4.4400e-003**	**0.0125**	**166.8774**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2775	0.2389	2.3807	5.0300e-003	0.5526	3.6400e-003	0.5562	0.1472	3.3800e-003	0.1506		513.3270	513.3270	0.0373	0.0225	520.9767
Unmitigated	0.2775	0.2389	2.3807	5.0300e-003	0.5526	3.6400e-003	0.5562	0.1472	3.3800e-003	0.1506		513.3270	513.3270	0.0373	0.0225	520.9767

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Place of Worship	123.04	123.04	123.04	262,416	262,416
Single Family Housing	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	123.04	123.04	123.04	262,416	262,416

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Parking Lot	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Place of Worship	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Single Family Housing	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873
NaturalGas Unmitigated	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	47.4542	5.1000e-004	4.6500e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5829	5.5829	1.1000e-004	1.0000e-004	5.6160
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	961.081	0.0104	0.0942	0.0792	5.7000e-004		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003		113.0684	113.0684	2.1700e-003	2.0700e-003	113.7403
Single Family Housing	69.8413	1.5100e-003	0.0129	5.4800e-003	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4333	16.4333	3.1000e-004	3.0000e-004	16.5309
Total		**0.0124**	**0.1117**	**0.0885**	**6.8000e-004**		**8.5500e-003**	**8.5500e-003**		**8.5500e-003**	**8.5500e-003**		**135.0845**	**135.0845**	**2.5900e-003**	**2.4700e-003**	**135.8873**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0474542	5.1000e-004	4.6500e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5829	5.5829	1.1000e-004	1.0000e-004	5.6160
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.961081	0.0104	0.0942	0.0792	5.7000e-004		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003		113.0684	113.0684	2.1700e-003	2.0700e-003	113.7403
Single Family Housing	0.0698413	1.5100e-003	0.0129	5.4800e-003	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4333	16.4333	3.1000e-004	3.0000e-004	16.5309
Total		**0.0124**	**0.1117**	**0.0885**	**6.8000e-004**		**8.5500e-003**	**8.5500e-003**		**8.5500e-003**	**8.5500e-003**		**135.0845**	**135.0845**	**2.5900e-003**	**2.4700e-003**	**135.8873**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155
Unmitigated	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5571					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.4000e-003	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004		0.3077	0.3077	3.1000e-004		0.3155
Total	**0.6287**	**1.9400e-003**	**0.1698**	**1.0000e-005**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**0.3077**	**0.3077**	**3.1000e-004**	**0.0000**	**0.3155**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5571					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.4000e-003	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004		0.3077	0.3077	3.1000e-004		0.3155
Total	**0.6287**	**1.9400e-003**	**0.1698**	**1.0000e-005**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**0.3077**	**0.3077**	**3.1000e-004**	**0.0000**	**0.3155**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish Church and School - Phase 3

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.68	1000sqft	0.04	1,680.00	0
Place of Worship	19.53	1000sqft	0.45	19,532.00	0
Parking Lot	27.00	Space	0.24	10,800.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	3,433.00	3
Single Family Housing	1.00	Dwelling Unit	0.32	3,298.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 3 construction plans provided by applicant.

Construction Phase - Construction schedule provided by applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Construction equipment inventory provided by applicant.

Off-road Equipment -

Off-road Equipment - Construction equipment inventory provided by applicant.

Holy Innocents Parish Church and School - Phase 3 - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - Construction trip schedule provided by applicant.

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - Operational phase vehicle trips provided by applicant.

Woodstoves - Project design plans indicate no hearths.

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	200.00	285.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	10.00	15.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1.70	0.00
tblFireplaces	NumberNoFireplace	0.20	0.00
tblFireplaces	NumberWood	0.10	0.00
tblLandUse	LandUseSquareFeet	19,530.00	19,532.00
tblLandUse	LandUseSquareFeet	1,800.00	3,433.00
tblLandUse	LandUseSquareFeet	1,800.00	3,298.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblTripsAndVMT	HaulingTripNumber	29.00	240.00
tblTripsAndVMT	VendorTripNumber	5.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	14.00	40.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	5.99	6.30
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	27.63	6.30
tblVehicleTrips	SU_TR	8.55	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	6.95	6.30
tblVehicleTrips	WD_TR	9.44	0.00
tblWoodstoves	NumberCatalytic	0.10	0.00
tblWoodstoves	NumberNoncatalytic	0.10	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Holy Innocents Parish Church and School - Phase 3 - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.7672	7.6171	9.9295	0.0239	0.8551	0.2515	1.1066	0.1934	0.2391	0.4326	0.0000	2,400.6831	2,400.6831	0.3323	0.1252	2,446.3085
2026	0.5586	5.6681	10.1390	0.0189	0.6005	0.1872	0.7876	0.1444	0.1722	0.3015	0.0000	1,866.4803	1,866.4803	0.4230	0.0465	1,890.9182
2027	16.3442	5.6578	10.0762	0.0187	0.5368	0.1705	0.7073	0.1444	0.1570	0.3013	0.0000	1,851.6713	1,851.6713	0.4224	0.0454	1,875.7533
Maximum	**16.3442**	**7.6171**	**10.1390**	**0.0239**	**0.8551**	**0.2515**	**1.1066**	**0.1934**	**0.2391**	**0.4326**	**0.0000**	**2,400.6831**	**2,400.6831**	**0.4230**	**0.1252**	**2,446.3085**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.7672	7.6171	9.9295	0.0239	0.6662	0.2515	0.9177	0.1648	0.2391	0.4040	0.0000	2,400.6831	2,400.6831	0.3323	0.1252	2,446.3085
2026	0.5586	5.6681	10.1390	0.0189	0.5368	0.1872	0.7074	0.1444	0.1722	0.3015	0.0000	1,866.4803	1,866.4803	0.4230	0.0465	1,890.9182
2027	16.3442	5.6578	10.0762	0.0187	0.5368	0.1705	0.7073	0.1444	0.1570	0.3013	0.0000	1,851.6713	1,851.6713	0.4224	0.0454	1,875.7533
Maximum	**16.3442**	**7.6171**	**10.1390**	**0.0239**	**0.6662**	**0.2515**	**0.9177**	**0.1648**	**0.2391**	**0.4040**	**0.0000**	**2,400.6831**	**2,400.6831**	**0.4230**	**0.1252**	**2,446.3085**

Holy Innocents Parish Church and School - Phase 3 - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**12.68**	**0.00**	**10.35**	**5.93**	**0.00**	**2.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155
Energy	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873
Mobile	0.2704	0.2578	2.3768	4.8200e-003	0.5526	3.6500e-003	0.5562	0.1472	3.3800e-003	0.1506		492.2439	492.2439	0.0388	0.0235	500.2284
Total	**0.9115**	**0.3715**	**2.6351**	**5.5100e-003**	**0.5526**	**0.0131**	**0.5657**	**0.1472**	**0.0129**	**0.1601**	**0.0000**	**627.6361**	**627.6361**	**0.0417**	**0.0260**	**636.4311**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155
Energy	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873
Mobile	0.2704	0.2578	2.3768	4.8200e-003	0.5526	3.6500e-003	0.5562	0.1472	3.3800e-003	0.1506		492.2439	492.2439	0.0388	0.0235	500.2284
Total	**0.9115**	**0.3715**	**2.6351**	**5.5100e-003**	**0.5526**	**0.0131**	**0.5657**	**0.1472**	**0.0129**	**0.1601**	**0.0000**	**627.6361**	**627.6361**	**0.0417**	**0.0260**	**636.4311**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2025	12/26/2025	5	20	
2	Site Preparation	Site Preparation	1/5/2026	1/23/2026	5	15	
3	Building Construction	Building Construction	2/2/2026	3/5/2027	5	285	
4	Paving	Paving	3/8/2027	3/26/2027	5	15	
5	Architectural Coating	Architectural Coating	3/29/2027	4/16/2027	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.24

Residential Indoor: 13,630; Residential Outdoor: 4,543; Non-Residential Indoor: 31,818; Non-Residential Outdoor: 10,606; Striped Parking Area: 648 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	2.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	30.00	0.00	240.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	40.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3097	0.0000	0.3097	0.0469	0.0000	0.0469			0.0000			0.0000
Off-Road	0.6528	5.9289	8.6301	0.0145		0.2396	0.2396		0.2279	0.2279		1,386.3445	1,386.3445	0.2828		1,393.4136
Total	**0.6528**	**5.9289**	**8.6301**	**0.0145**	**0.3097**	**0.2396**	**0.5494**	**0.0469**	**0.2279**	**0.2748**		**1,386.3445**	**1,386.3445**	**0.2828**		**1,393.4136**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0239	1.6289	0.4367	6.7800e-003	0.2101	0.0100	0.2201	0.0576	9.5600e-003	0.0672		747.5370	747.5370	0.0433	0.1188	784.0235
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0904	0.0592	0.8627	2.6400e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		266.8016	266.8016	6.2700e-003	6.4200e-003	268.8714
Total	**0.1144**	**1.6882**	**1.2994**	**9.4200e-003**	**0.5454**	**0.0118**	**0.5572**	**0.1465**	**0.0113**	**0.1578**		**1,014.3386**	**1,014.3386**	**0.0496**	**0.1252**	**1,052.8949**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1208	0.0000	0.1208	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	0.6528	5.9289	8.6301	0.0145		0.2396	0.2396		0.2279	0.2279	0.0000	1,386.3445	1,386.3445	0.2828		1,393.4136
Total	**0.6528**	**5.9289**	**8.6301**	**0.0145**	**0.1208**	**0.2396**	**0.3604**	**0.0183**	**0.2279**	**0.2462**	**0.0000**	**1,386.3445**	**1,386.3445**	**0.2828**		**1,393.4136**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0239	1.6289	0.4367	6.7800e-003	0.2101	0.0100	0.2201	0.0576	9.5600e-003	0.0672		747.5370	747.5370	0.0433	0.1188	784.0235
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0904	0.0592	0.8627	2.6400e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		266.8016	266.8016	6.2700e-003	6.4200e-003	268.8714
Total	**0.1144**	**1.6882**	**1.2994**	**9.4200e-003**	**0.5454**	**0.0118**	**0.5572**	**0.1465**	**0.0113**	**0.1578**		**1,014.3386**	**1,014.3386**	**0.0496**	**0.1252**	**1,052.8949**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2651	0.0000	0.2651	0.0286	0.0000	0.0286			0.0000			0.0000
Off-Road	0.4511	4.6490	5.5112	0.0102		0.1854	0.1854		0.1706	0.1706		983.2459	983.2459	0.3180		991.1960
Total	**0.4511**	**4.6490**	**5.5112**	**0.0102**	**0.2651**	**0.1854**	**0.4506**	**0.0286**	**0.1706**	**0.1992**		**983.2459**	**983.2459**	**0.3180**		**991.1960**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0537	0.8094	2.5600e-003	0.3353	1.7400e-003	0.3371	0.0889	1.6000e-003	0.0905		258.6990	258.6990	5.7000e-003	6.0500e-003	260.6440
Total	**0.0853**	**0.0537**	**0.8094**	**2.5600e-003**	**0.3353**	**1.7400e-003**	**0.3371**	**0.0889**	**1.6000e-003**	**0.0905**		**258.6990**	**258.6990**	**5.7000e-003**	**6.0500e-003**	**260.6440**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1034	0.0000	0.1034	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	0.4511	4.6490	5.5112	0.0102		0.1854	0.1854		0.1706	0.1706	0.0000	983.2459	983.2459	0.3180		991.1960
Total	**0.4511**	**4.6490**	**5.5112**	**0.0102**	**0.1034**	**0.1854**	**0.2888**	**0.0112**	**0.1706**	**0.1818**	**0.0000**	**983.2459**	**983.2459**	**0.3180**		**991.1960**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0537	0.8094	2.5600e-003	0.3353	1.7400e-003	0.3371	0.0889	1.6000e-003	0.0905		258.6990	258.6990	5.7000e-003	6.0500e-003	260.6440
Total	**0.0853**	**0.0537**	**0.8094**	**2.5600e-003**	**0.3353**	**1.7400e-003**	**0.3371**	**0.0889**	**1.6000e-003**	**0.0905**		**258.6990**	**258.6990**	**5.7000e-003**	**6.0500e-003**	**260.6440**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523		1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**		**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0142	0.5571	0.2035	2.4700e-003	0.0897	2.7300e-003	0.0924	0.0258	2.6200e-003	0.0284		266.6525	266.6525	9.5100e-003	0.0385	278.3506
Worker	0.1138	0.0717	1.0792	3.4100e-003	0.4471	2.3200e-003	0.4494	0.1186	2.1400e-003	0.1207		344.9321	344.9321	7.6000e-003	8.0600e-003	347.5254
Total	**0.1280**	**0.6287**	**1.2827**	**5.8800e-003**	**0.5368**	**5.0500e-003**	**0.5418**	**0.1444**	**4.7600e-003**	**0.1492**		**611.5845**	**611.5845**	**0.0171**	**0.0465**	**625.8760**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523	0.0000	1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**	**0.0000**	**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0142	0.5571	0.2035	2.4700e-003	0.0897	2.7300e-003	0.0924	0.0258	2.6200e-003	0.0284		266.6525	266.6525	9.5100e-003	0.0385	278.3506
Worker	0.1138	0.0717	1.0792	3.4100e-003	0.4471	2.3200e-003	0.4494	0.1186	2.1400e-003	0.1207		344.9321	344.9321	7.6000e-003	8.0600e-003	347.5254
Total	**0.1280**	**0.6287**	**1.2827**	**5.8800e-003**	**0.5368**	**5.0500e-003**	**0.5418**	**0.1444**	**4.7600e-003**	**0.1492**		**611.5845**	**611.5845**	**0.0171**	**0.0465**	**625.8760**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523		1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**		**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0138	0.5530	0.2011	2.4200e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		261.4118	261.4118	9.5400e-003	0.0377	272.8937
Worker	0.1075	0.0655	1.0189	3.3200e-003	0.4471	2.1800e-003	0.4493	0.1186	2.0100e-003	0.1206		335.3637	335.3637	6.9500e-003	7.6500e-003	337.8174
Total	**0.1214**	**0.6185**	**1.2200**	**5.7400e-003**	**0.5368**	**4.9000e-003**	**0.5417**	**0.1444**	**4.6100e-003**	**0.1490**		**596.7755**	**596.7755**	**0.0165**	**0.0454**	**610.7111**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4307	5.0394	8.8563	0.0130		0.1656	0.1656		0.1523	0.1523	0.0000	1,254.8958	1,254.8958	0.4059		1,265.0422
Total	**0.4307**	**5.0394**	**8.8563**	**0.0130**		**0.1656**	**0.1656**		**0.1523**	**0.1523**	**0.0000**	**1,254.8958**	**1,254.8958**	**0.4059**		**1,265.0422**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0138	0.5530	0.2011	2.4200e-003	0.0897	2.7200e-003	0.0924	0.0258	2.6000e-003	0.0284		261.4118	261.4118	9.5400e-003	0.0377	272.8937
Worker	0.1075	0.0655	1.0189	3.3200e-003	0.4471	2.1800e-003	0.4493	0.1186	2.0100e-003	0.1206		335.3637	335.3637	6.9500e-003	7.6500e-003	337.8174
Total	**0.1214**	**0.6185**	**1.2200**	**5.7400e-003**	**0.5368**	**4.9000e-003**	**0.5417**	**0.1444**	**4.6100e-003**	**0.1490**		**596.7755**	**596.7755**	**0.0165**	**0.0454**	**610.7111**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396		696.1978	696.1978	0.2085		701.4109
Paving	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4020**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**		**696.1978**	**696.1978**	**0.2085**		**701.4109**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9100e-003	0.3160	0.1149	1.3800e-003	0.0513	1.5500e-003	0.0528	0.0148	1.4900e-003	0.0162		149.3782	149.3782	5.4500e-003	0.0216	155.9393
Worker	0.0269	0.0164	0.2547	8.3000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		83.8409	83.8409	1.7400e-003	1.9100e-003	84.4543
Total	**0.0348**	**0.3324**	**0.3696**	**2.2100e-003**	**0.1630**	**2.1000e-003**	**0.1651**	**0.0444**	**1.9900e-003**	**0.0464**		**233.2191**	**233.2191**	**7.1900e-003**	**0.0235**	**240.3936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3601	3.2001	4.6122	7.4800e-003		0.1498	0.1498		0.1396	0.1396	0.0000	696.1978	696.1978	0.2085		701.4109
Paving	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4020**	**3.2001**	**4.6122**	**7.4800e-003**		**0.1498**	**0.1498**		**0.1396**	**0.1396**	**0.0000**	**696.1978**	**696.1978**	**0.2085**		**701.4109**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9100e-003	0.3160	0.1149	1.3800e-003	0.0513	1.5500e-003	0.0528	0.0148	1.4900e-003	0.0162		149.3782	149.3782	5.4500e-003	0.0216	155.9393
Worker	0.0269	0.0164	0.2547	8.3000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		83.8409	83.8409	1.7400e-003	1.9100e-003	84.4543
Total	**0.0348**	**0.3324**	**0.3696**	**2.2100e-003**	**0.1630**	**2.1000e-003**	**0.1651**	**0.0444**	**1.9900e-003**	**0.0464**		**233.2191**	**233.2191**	**7.1900e-003**	**0.0235**	**240.3936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577		403.4129	403.4129	0.0548		404.7829
Total	**16.3134**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**		**403.4129**	**403.4129**	**0.0548**		**404.7829**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9600e-003	0.1580	0.0575	6.9000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.4000e-004	8.1200e-003		74.6891	74.6891	2.7300e-003	0.0108	77.9696
Worker	0.0269	0.0164	0.2547	8.3000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		83.8409	83.8409	1.7400e-003	1.9100e-003	84.4543
Total	**0.0308**	**0.1744**	**0.3122**	**1.5200e-003**	**0.1374**	**1.3300e-003**	**0.1387**	**0.0370**	**1.2400e-003**	**0.0383**		**158.5300**	**158.5300**	**4.4700e-003**	**0.0127**	**162.4240**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1964	1.5358	2.6274	4.2300e-003		0.0582	0.0582		0.0577	0.0577	0.0000	403.4129	403.4129	0.0548		404.7829
Total	**16.3134**	**1.5358**	**2.6274**	**4.2300e-003**		**0.0582**	**0.0582**		**0.0577**	**0.0577**	**0.0000**	**403.4129**	**403.4129**	**0.0548**		**404.7829**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9600e-003	0.1580	0.0575	6.9000e-004	0.0256	7.8000e-004	0.0264	7.3800e-003	7.4000e-004	8.1200e-003		74.6891	74.6891	2.7300e-003	0.0108	77.9696
Worker	0.0269	0.0164	0.2547	8.3000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.0000e-004	0.0302		83.8409	83.8409	1.7400e-003	1.9100e-003	84.4543
Total	**0.0308**	**0.1744**	**0.3122**	**1.5200e-003**	**0.1374**	**1.3300e-003**	**0.1387**	**0.0370**	**1.2400e-003**	**0.0383**		**158.5300**	**158.5300**	**4.4700e-003**	**0.0127**	**162.4240**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2704	0.2578	2.3768	4.8200e-003	0.5526	3.6500e-003	0.5562	0.1472	3.3800e-003	0.1506		492.2439	492.2439	0.0388	0.0235	500.2284
Unmitigated	0.2704	0.2578	2.3768	4.8200e-003	0.5526	3.6500e-003	0.5562	0.1472	3.3800e-003	0.1506		492.2439	492.2439	0.0388	0.0235	500.2284

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Place of Worship	123.04	123.04	123.04	262,416	262,416
Single Family Housing	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	123.04	123.04	123.04	262,416	262,416

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Parking Lot	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Place of Worship	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Single Family Housing	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873
NaturalGas Unmitigated	0.0124	0.1118	0.0885	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003		135.0845	135.0845	2.5900e-003	2.4800e-003	135.8873

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	47.4542	5.1000e-004	4.6500e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5829	5.5829	1.1000e-004	1.0000e-004	5.6160
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	961.081	0.0104	0.0942	0.0792	5.7000e-004		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003		113.0684	113.0684	2.1700e-003	2.0700e-003	113.7403
Single Family Housing	69.8413	1.5100e-003	0.0129	5.4800e-003	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4333	16.4333	3.1000e-004	3.0000e-004	16.5309
Total		**0.0124**	**0.1117**	**0.0885**	**6.8000e-004**		**8.5500e-003**	**8.5500e-003**		**8.5500e-003**	**8.5500e-003**		**135.0845**	**135.0845**	**2.5900e-003**	**2.4700e-003**	**135.8873**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0474542	5.1000e-004	4.6500e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5829	5.5829	1.1000e-004	1.0000e-004	5.6160
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.961081	0.0104	0.0942	0.0792	5.7000e-004		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003		113.0684	113.0684	2.1700e-003	2.0700e-003	113.7403
Single Family Housing	0.0698413	1.5100e-003	0.0129	5.4800e-003	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4333	16.4333	3.1000e-004	3.0000e-004	16.5309
Total		**0.0124**	**0.1117**	**0.0885**	**6.8000e-004**		**8.5500e-003**	**8.5500e-003**		**8.5500e-003**	**8.5500e-003**		**135.0845**	**135.0845**	**2.5900e-003**	**2.4700e-003**	**135.8873**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155
Unmitigated	0.6287	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	0.3077	0.3077	3.1000e-004	0.0000	0.3155

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5571					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.4000e-003	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004		0.3077	0.3077	3.1000e-004		0.3155
Total	**0.6287**	**1.9400e-003**	**0.1698**	**1.0000e-005**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**0.3077**	**0.3077**	**3.1000e-004**	**0.0000**	**0.3155**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5571					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.4000e-003	1.9400e-003	0.1698	1.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004		0.3077	0.3077	3.1000e-004		0.3155
Total	**0.6287**	**1.9400e-003**	**0.1698**	**1.0000e-005**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**0.3077**	**0.3077**	**3.1000e-004**	**0.0000**	**0.3155**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

Greenhouse Gas Emissions Analysis

Technical Study

TO: Alexis Oropeza
City of Long Beach
Long Beach Development Services Planning Bureau
411 West Ocean Boulevard, 3rd Floor
Long Beach, CA 90802

FROM: Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
Culver City, CA 90232

DATE: May 26, 2022

RE: Holy Innocents Parish Church and School Project – California Environmental Quality Act (CEQA) Greenhouse Gas (GHG) Emissions Impacts Assessment

Introduction

Terry A. Hayes Associates Inc. (TAHA) completed an GHG Assessment for the Holy Innocents Parish Church and School Project (proposed project) in accordance with provisions of California Environmental Quality Act (CEQA) Statutes and Guidelines. This Assessment is organized as follows:

- Project Description
- Climate Change Topical Information
- Regulatory Framework
- Existing Setting
- Significance Thresholds and Local Standards
- Methodology
- Impact Assessment
- References

Terry A. Hayes Associates Inc.
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Culver City, California 90232
310.839.4200 fax 310.839.4201

Project Description

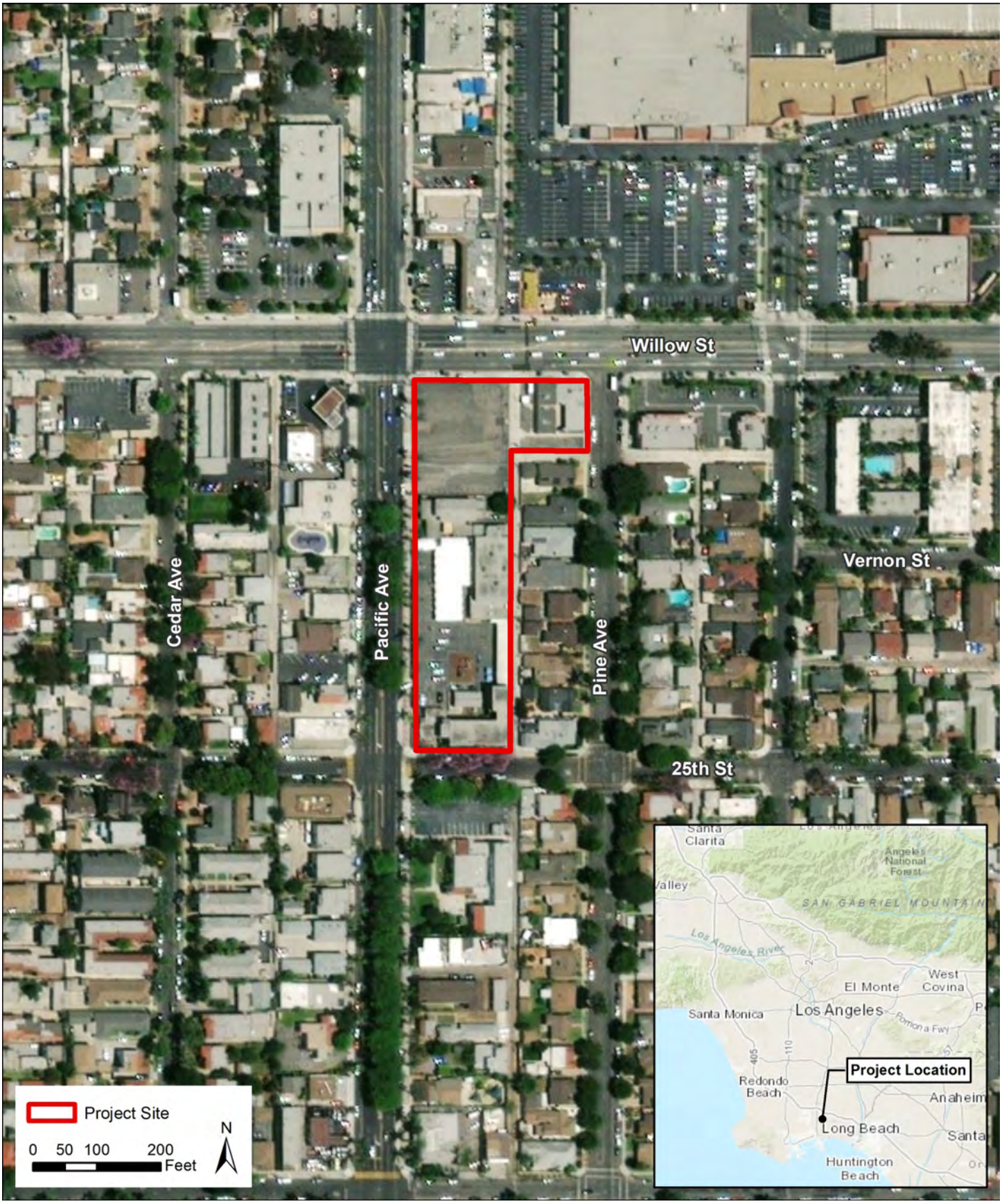
Holy Innocents Parish has a near century-long history in the City of Long Beach and is the second largest parish in the city. The existing Holy Innocents Church is located at 425 East 20th Street in the City of Long Beach. The existing church location includes an on-site rectory. In 1956, due to limited land area near the existing church location, the Parish purchased a tract of six lots at 25th and Pacific Avenue, which would ultimately be the location of the existing Holy Innocents Parish School. The school has operated at this location since 1958 and has grown over the years to serve Transitional Kindergarten to 8th grade students.

Holy Innocents Parish proposes a three-phased development to expand the existing parish school and relocate and construct a new church, rectory, convent, and gymnasium near the existing school located at 2500 Pacific Avenue in order to develop a cohesive parish campus (proposed project). **Figure 1** shows the location of the proposed project. The three development phases of the proposed project are as follows:

1. **Phase 1.** Demolition of three one-story wood structures totaling 1,674 square feet, a metal overhang, the existing playground, and 27 parking stalls. New construction will include a 19,37 square-foot two-story school building consisting of eight classrooms, administration space, and a library. No additional parking is to be constructed at this time with 105 parking spaces to remain. The existing hall and convent will remain. Phase 1 construction is anticipated to begin Summer 2022 and to be completed by Fall 2023.
2. **Phase 2.** Demolition of the 7,812 square-foot parish hall located near the east property line and 5,439 square-foot corner commercial office building located to the east across the existing alley. A 9,414 square-foot single-story gymnasium will be constructed in the northeast corner of the subject site. The gymnasium will include a small kitchen, stage, and restrooms. Phase 2 construction is anticipated to commence in Fall 2024 and complete by Spring 2025.
3. **Phase 3**. Demolition of the 5,193 square-foot 7-bedroom convent and 1,100 square-foot single-story school office. Construction will include the 19,532 sq square-foot church, 3,433 sq. ft. two-story rectory, 3,298 square-foot two-story convent and 1,680 square-foot two-story parish office. The church structure will include a single-story assembly area, a basement area with restrooms, storage, and mechanical room, and a choir loft. Phase 3 construction is anticipated to commence in Winter 2016 and complete in Spring 2027.

The proposed development will include the expanded operations of the existing elementary school and the construction of a new gymnasium, church, rectory, and convent. The anticipated hours of operations for the proposed project are as follows:

- **Church:** 6:30 a.m. – 8:00 p.m.
- **Parish School Office:** Monday – Friday 9:30 a.m. – 3:30 p.m.; Sunday 10:30 a.m. – 2:00 p.m.
- **School:** Monday – Friday 7:30 a.m. – 5:30 p.m.
- **Gymnasium:** 8:00 a.m. – 5:00 p.m.



Source: TAHA, 2022.

Holy Innocents Parish Church and School Project
Greenhouse Gas Emissions Assessment

TAHA 2021-094

CITY OF LONG BEACH

FIGURE 1

PROJECT LOCATION

School Operations

The parish school currently offers education for grades TK – 8th. The new school building will enable the parish school to include instruction for 9th through 12th grades. There will be up to 23 students in each grade level. The student body will be made up of roughly 315 students, 16 teachers, six aids, two facility staff, one main office secretary and one business office staff. The gymnasium will hold a range of events including basketball, volleyball, physical education class, theater, parent/community meetings and events, dances and be used for general cafeteria use.

Church Operations

Weekday masses will be offered at 8:00 a.m. and 7:00 p.m., and confessions are scheduled for 7:00 p.m. on Fridays. Approximately 30-40 people attend weekday masses. Saturday masses are held at 8:00 a.m. and 5:00 p.m. Approximately 30-40 people attend the morning mass and approximately 250 attend the evening mass. Weddings and funerals are also scheduled on many Saturdays. Sunday masses run from 7:00 a.m. to 2:00 p.m. with an hour between each service to allow ample time for attendees to vacate the parking lot before the next group arrives. Approximately 250 people and 2-3 admin staff attend Sunday masses. The church will be open ahead of each mass to allow for quiet reflection and prayer.

Climate Change Topical Background

Climate change refers to variations in average long-term meteorological conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and frequency and severity of extreme weather events. Historical records indicate that global climate fluctuations have occurred in the past due to natural phenomena; however, recent data increasingly suggests that the current global conditions are distinct from previous patterns and are influenced by anthropogenic (human-sourced) GHG emissions. GHGs are a class of pollutants that are generally understood to play a critical role in controlling atmospheric temperature near the Earth's surface by allowing high frequency shortwave solar radiation to enter the planet's atmosphere and then subsequently trapping low frequency infrared radiative energy that would otherwise emanate back out into space. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes; the glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. The levels of GHGs in the atmosphere affect how much heat energy can be absorbed.

Radiative forcing is an expression of the net difference in energy entering Earth's atmosphere versus leaving it. Each GHG possesses its own degree of climate forcing ability to absorb low frequency infrared energy, meaning that some GHGs are more effective in trapping heat in the atmosphere than others. Water vapor is the most environmentally prevalent GHG, however, definitive methods are not established to regulate emissions and concentrations of water vapor in the atmosphere. After water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are the most ubiquitous GHGs, and CO_2 is commonly used as the standard reference for characterizing the relative global warming potential (GWP) of other GHGs. The GWP value describes the relative magnitude of climate forcing effects of GHGs and is used to convert emissions

into CO_2-equivalents (CO_2e). **Table 1** presents the GWP value and atmospheric lifetime of CO_2, CH_4, and N_2O, as well as other regulated GHGs emitted by human activities. GHG emissions that would be generated by the proposed project are assessed in units of metric tons of CO_2e ($MTCO_2e$).

TABLE 1: GLOBAL WARMING POTENTIAL FOR VARIOUS GREENHOUSE GASES

Pollutant	Lifetime (Years) /a/	Global Warming Potential (20-Year)	Global Warming Potential (100-Year) /b/
Carbon Dioxide (CO_2)	--	1	1
Methane (CH_4)	12	21	25
Nitrous Oxide (N_2O)	114	310	298
Nitrogen Trifluoride	740	Unknown	17,200
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800
Perfluorocarbons (PFCs)	2,600-50,000	6,500-9,200	7,390-12,200
Hydrofluorocarbons (HFCs)	1-270	140-11,700	124-14,800

/a/ Lifetime refers to the approximate amount of time it would take for the anthropogenic increment to an atmospheric pollutant concentration to return to its natural level as a result of either being converted to another chemical compound or being taken out of the atmosphere via a sink.
/b/ The United States primarily uses the 100-year GWP as a measure of the relative impact of different GHGs. However, the scientific community has developed a number of other metrics that could be used for comparing one GHG to another. These metrics may differ based on timeframe, the climate endpoint measured, or the method of calculation. For example, the 20-year GWP is sometimes used as an alternative to the 100-year GWP. Just like the 100-year GWP is based on the energy absorbed by a gas over 100 years, the 20-year GWP is based on the energy absorbed over 20 years. This 20-year GWP prioritizes gases with shorter lifetimes, because it does not consider impacts that happen more than 20 years after the emissions occur. Because all GWPs are calculated relative to CO_2, GWPs based on a shorter timeframe will be larger for gases with lifetimes shorter than that of CO_2, and smaller for gases with lifetimes longer than CO_2.

SOURCE: CARB, *Global Warming Potentials,* https://www.arb.ca.gov/cc/inventory/background/gwp.htm, accessed March 30, 2022.

Existing Setting

Emissions of GHGs are the result of both natural and human-influenced activities. Volcanic activity, forest fires, decomposition, industrial processes, landfills, consumption of fossil fuels for power generation, transportation, heating, and cooling are the primary sources of GHG emissions. Without human activity, the Earth would maintain an approximate, but varied, balance between the emission of GHGs into the atmosphere and the storage of GHG in oceans and terrestrial ecosystems. Increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.) has contributed to a rapid increase in atmospheric levels of GHGs over the last 150 years.

Table 2 shows GHG emissions from 2010 to 2019 in California. California's GHG emissions have followed a declining trend since 2008. In 2019, emissions from routine emitting activities statewide were 7.1 million metric tons of CO_2e ($MMTCO_2e$) lower than 2018 levels and almost 13 $MMTCO_2e$ below the 2020 GHG Limit of 431 $MMTCO_2e$. Of note, between October 23, 2015, and February 18, 2016, an exceptional natural gas leak event occurred at the Aliso Canyon natural gas storage facility that resulted in unexpected GHG emissions of considerable magnitude.

TABLE 2: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY TREND

Sector	CO_2e Emissions (Million Metric Tons)									
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Electricity Generation (In-State)	46.7	42.6	53.7	51.4	52.1	50.9	42.2	38.2	38.5	37.2
Electricity Generation (Imports)	43.6	46.6	44.4	40.0	36.8	33.9	26.4	23.9	24.6	21.7
Transportation	165.1	161.8	161.4	161.3	162.6	166.2	169.8	171.2	169.6	166.1
Industrial	91.1	89.4	88.9	91.7	92.5	90.3	89.0	88.8	89.2	88.2
Commercial and Residential	45.9	46.0	43.5	44.2	38.2	38.8	40.6	41.3	41.4	43.8
Agriculture	33.7	34.4	35.5	33.8	34.7	33.5	33.3	32.5	32.7	31.8
High GWP	13.5	14.5	15.5	16.8	17.7	18.6	19.2	20.0	20.4	20.6
Recycling and Waste	8.3	8.4	8.3	8.4	8.4	8.5	8.6	8.7	8.7	8.9
Emissions Total	**447.9**	**443.7**	**451.3**	**447.6**	**443.0**	**440.7**	**429.1**	**424.6**	**425.1**	**418.2**

SOURCE: CARB, *California Greenhouse Gas Emission Inventory - 2021 Edition*, available at https://ww2.arb.ca.gov/ghg-inventory-data.

The exceptional incident released approximately 109,000 metric tons of CH_4, which equated to approximately 1.96 $MMTCO_2e$ of unanticipated emissions in 2015 and an additional 0.52 $MMTCO_2e$ in 2016. According to CARB, these emissions will be mitigated in the future through projects funded by the Southern California Gas Company based on legal settlement and are presented alongside but tracked separately from routine inventory emissions.[1,2]

Regional and local GHG emissions inventories have also been prepared in recent years. For the SCAG region, development of the 2012 RTP/SCS included a Metropolitan Planning Area-wide GHG emissions inventory for the base year of 2012, as well as a projection for the year 2020.[3] Similar to the California GHG emissions profile, transportation, industrial, and electricity uses represented the greatest contributors to the MPA inventory. Total SCAG emissions were forecasted to be approximately 216 $MMTCO_2e$ in 2020, with approximately 38.5 percent of emissions within the SCAG region being attributed to the transportation sector. SCAG modeling prepared to support the Program Environmental Impact Report for the Connect SoCal plan estimated that in 2019, on-road light, medium, and heavy-duty vehicle GHG emissions were approximately 75.8 $MMTCO_2e$, of which 37.6 $MMTCO_2e$—approximately 50 percent—occurred within Los Angeles County.[4]

[1]CARB, *California Greenhouse Gas Inventory for 2000-2019 – Trends of Emissions and Other Indicators*, July 2021.
[2]CARB, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.
[3]SCAG, *Final South California Association of Governments (SCAG) Regional Greenhouse Gas Inventory and Reference Case Projections, 1990-2035*, May 2012.
[4]SCAG, *Draft Program Environmental Impact Report for Connect SoCal*, December 2019.

Regulatory Framework

There are many federal, state, regional, and local regulations and policies related to climate change and GHG emissions. The following list is not designed to be a comprehensive list of regulations and policies and is focused on select regulations and policies that are pertinent to the proposed project.

Federal

***Massachusetts vs. Environmental Protection Agency*, 127 S. Ct. 1438 (2007)**. A Supreme Court ruling that CO_2 and other GHGs are pollutants under the Clean Air Act.

Energy Independence and Security Act. This act set a Renewable Fuel Standard of 36 billion gallons of biofuel usage by 2022, increases Corporate Average Fuel Economy Standards of setting 35 miles per gallon of cars and light trucks by 2020 and sets new standards for lighting and residential and commercial appliance equipment.

National Fuel Efficiency Policy and Fuel Economy Standards. This 2009 policy was designed to increase fuel economy by more than five percent by 2016 starting with model year 2012 cars and trucks.

Heavy-Duty Vehicle Program. This 2011 program established the first fuel efficiency requirements for medium- and heavy-duty vehicles beginning with model year 2014.

State

California Building Energy Efficiency Standards (Title 24, Part 6). The California Building Energy Efficiency Standards for Residential and Non-residential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The 2019 Title 24 Standards went into effect on January 1, 2020. The 2019 Title 24 Standards represent "challenging but achievable design and construction practices" that represent a major step towards meeting the Zero Net Energy (ZNE) goal." Homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those built under the 2016 standards. The California Building Code is updated triennially and is expected to become more energy efficient with each update.

California Green Building Standards (Title 24, Part 11). The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, includes mandatory measures related to energy efficiency, water efficiency and conservation, material conservation, resource efficiency, and environmental quality. Compliance with the CALGreen Code is enforced through the building permit process.

Senate Bill 1078 (SB 1078), Senate Bill 107 (SB 107), Executive Order (E.O.) S-14-08 (Renewables Portfolio Standard), and Senate Bill 100 (SB 100). Signed on September 12, 2002, SB 1078 required

California to generate 20 percent of its electricity from renewable energy by 2017. SB 107, signed on September 26, 2006, changed the due date for this goal from 2017 to 2010, which was achieved by the State. On November 17, 2008, E.O. S-14-08 established a Renewables Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. SB 100 accelerated and expanded the standards set forth in SB 350 by establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Executive Order (E.O.) S-3-05. E.O. S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32. The California Global Warming Solutions Act of 2006, also known as Assembly Bill 32, focuses on reducing GHG emissions in California and requires the California Air Resources Board (CARB) to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020. The 2020 target reductions were estimated to be 174 million metric tons of CO_2e. In November 2017, CARB adopted California's 2017 Scoping Plan: The Strategy for Achieving California's 2030 GHG target (2017 Scoping Plan). The 2017 Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals.

Senate Bill 375 (SB 375). Provides a means for achieving Assembly Bill 32 goals through the reduction in emissions by cars and light trucks. SB 375 requires Regional Transportation Plans (RTPs) prepared by Metropolitan Planning Organizations (MPOs) to include Sustainable Communities Strategies (SCSs).

Senate Bill 743 (SB 743). SB 743, adopted September 27, 2013, encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled, which contribute to GHG emissions, as required by AB 32. Key provisions of SB 743 include reforming aesthetics and parking CEQA analysis for certain urban infill projects and eliminating the measurement of auto delay, including Level of Service, as a metric that can be used for measuring traffic impacts in transit priority areas. SB 743 requires the Governor's Office of Planning and Research to develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects within transit priority areas that promote the "…reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." It also allows the Office of Planning and Research to develop alternative metrics outside of transit priority areas.

Executive Order (E.O) B-30-15. This policy set a goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. The E.O. establishes GHG emissions reduction targets to reduce emissions to 80 percent below 1990 levels by 2050 and sets an interim target of emissions reductions for 2030 as being necessary to guide regulatory policy and investments in California and put California on the most cost-effective path for long-term emissions reductions.

Senate Bill 32 (SB 32). This bill requires that statewide GHG emissions be reduced to 40 percent less than 1990 levels by 2030.

Executive Order (E.O) B-55-18. This policy established a statewide policy to achieve carbo neutrality as soon as possible and no later than 2045 and to achieve and maintain net negative emissions thereafter. The E.O. states that the new goal is in addition to the prior statewide targets for reduction of GHG emissions.

Regional

Southern California Association of Governments (SCAG) 2020–2045 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). The SCAG Regional Council formally adopted the Connect SoCal 2020–2045 RTP/SCS (Connect SoCal) on September 3, 2020. Rooted in the 2008 and 2012 RTP/SCS plans, Connect SoCal's "Core Vision" focuses on maintaining and enhancing management of the transportation network while also expanding mobility choices by creating hubs that connect housing, jobs, and transit accessibility. The "Core Vision" of Connect SoCal is organized into six key focus areas that expand upon progress made in the 2016 RTP/SCS: Sustainable Development, System Preservation and Resilience, Demand & System Management, Transit Backbone, Complete Streets, and Goods Movement. Connect SoCal incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality and reducing GHG emissions, and encouraging growth in walkable, mixed-use communities with convenient access to transit infrastructure and employment.

Each of the six key focus areas in Connect SoCal contains strategies to achieve the intended holistic objectives of the Connect SoCal Growth Vision. The Sustainable Development focus area is the portion of the planning document dedicated to the SCS, which is the most directly applicable element to GHG emissions. The SCS evaluated the following Priority Growth Areas (PGAs) that were selected and developed based on their ability to support potential mode shift and shortened trip distances:

- Transit Priority Areas (TPAs) are defined as an area within one-half mile of a major transit stop that is existing or planned. This includes an existing rail or bus rapid transit station, a ferry terminal served by bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Based on California Public Resources Code Section 21099 (a)(7) and Section 21064.3)
- High Quality Transit Areas (HQTAs) are generally walkable transit villages or corridors, consistent with the adopted RTP/SCS that are within one half-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. Freeway transit

corridors with no bus stops on the freeway alignment do not have a directly associated HQTA. A high-quality transit corridor (HQTC) is defined as a corridor with fixed route bus service containing intervals no longer than 15 minutes during peak commute hours (Based on California Public Resources Code Section 21155(b)).

- Livable Corridors refer to an arterial network that is a subset of the HQTAs based on level of transit service and land use planning efforts.
- Neighborhood Mobility Areas (NMAs) are areas with high intersection density (generally 50 intersections per square mile or more), low to moderate traffic speeds and robust residential retail connections which can support the use of Neighborhood Electric Vehicles or active transportation for short trips.
- Job Centers are areas with significantly higher employment density than surrounding areas.

Connect SoCal devised a growth priority hierarchy in order to optimize opportunities for shorter trip distances and drivers to switch to electric vehicles, which directs growth towards the areas described above in the following order: TPAs, Livable Corridors, Job Centers, HQTAs, and NMAs. Development in these areas will be guided by the following Connect SoCal strategies to reduce GHG emissions: focusing growth near destinations and mobility options; promoting diverse housing choice; leveraging technology innovations; supporting implementation of sustainability policies; and promoting a green region. SCAG, in conjunction with CARB, determined that implementation of Connect SoCal would achieve regional GHG reductions relative to 2005 SCAG areawide levels of approximately eight percent in 2020 and approximately 19 percent by 2035.[5] The regional GHG emissions reductions achieved through the Connect SoCal Growth Vision are consistent with the regional targets set forth by CARB through SB 375.

Local

Local jurisdictions, such as the City of Long Beach, have the authority and responsibility to reduce GHG emissions through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of GHG emissions resulting from its land use decisions. The Air Quality Element of the City of Long Beach General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. While the Air Quality Element does not specifically address climate change, reductions in other pollutants typically lead to a reduction in GHG emissions. This Element acknowledges the interrelationships among transportation and land use planning in meeting the City's goals. The General Plan includes a goal to reduce emissions through reduced energy consumption.

Per CEQA Guidelines Section 15183.5, the City adopted the Sustainable City Action Plan on February 2, 2010. The Sustainable City Action Plan includes initiatives, goals and actions that will move the City toward becoming more sustainable. The Sustainable City Action Plan includes chapters related to buildings and

[5]SCAG, *Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy*, May 2020.

neighborhoods, energy, green economy and lifestyle, transportation, urban nature, waste reduction, and water. Implementation of this plan would contribute to a reduction in the City's overall GHG emissions.

Pursuant to California SB 379, all California cities and counties are required to include climate adaptation and resiliency strategies in their general plans to ensure safety and protection of their community in the future. The City is in the process of approving a Climate Change Action and Adaptation Plan that will provide a framework for creating or updating policies, programs, practices, and incentives for Long Beach residents and businesses to reduce the City's GHG footprint, and ensure the community and physical assets are better protected from the impacts of climate change.

Section 21.45.400 of the Long Beach Municipal Code regulates public and private development to include various standards that promote green buildings. A green building, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water and other resources more efficiently; and reducing the overall impact on the environment.

On May 12, 2009, the Long Beach City Council approved Ordinance No. ORD- 09-0013 (Subsection 21.45.400—Green Building Standards for Public and Private Development). However, this Ordinance applies to the alteration of non-residential buildings results in the expansion of 50,000 gross square feet or more.

Significance Thresholds

This Assessment was undertaken to determine whether construction or operation of the proposed project would have the potential to result in significant environmental impacts related to GHG emissions in the context of the Appendix G Environmental Checklist criteria of the CEQA Statute and Guidelines. Implementation of the proposed project may result in a significant environmental impact related to GHG emissions if the proposed project would:

[a] Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or,

[b] Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

Section 15064.4 of the CEQA Guidelines states that a lead agency should make a good-faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project, and that the lead agency should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and,

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The CEQA Guidelines direct lead agencies to adopt thresholds of significance for GHG emissions. However, the CEQA Guidelines allow some flexibility in selecting the most appropriate thresholds of significance. When adopting these thresholds, the amended Guidelines allow lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence, and/or to develop their own significance threshold.

Neither the County nor the SCAQMD has officially adopted a quantitative threshold value for determining the significance of GHG emissions that will be generated by projects under CEQA. Although there are no GHG emissions thresholds presently promulgated, the SCAQMD convened a GHG CEQA Significance Threshold Stakeholder Working Group beginning in April of 2008 to examine alternatives for establishing quantitative GHG thresholds. Based on collaborative efforts of the Working Group, SCAQMD staff published the *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* in October 2008.[6] The Working Group proposed a 3,000 $MTCO_2e$ annual threshold for commercial projects, which was derived using a 90 percent capture rate for proposed CEQA projects within the SCAQMD jurisdiction. Projects with annual GHG emissions below 3,000 $MTCO_2e$ are assumed to result in less than significant impacts.

Methodology

GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod), as recommended by the SCAQMD. CalEEMod quantifies GHG emissions from construction activities and future operation of projects. Sources of GHG emissions during project construction would include heavy-duty off-road diesel equipment and vehicular travel to and from the project site. In accordance with SCAQMD methodology, the total amount of GHG emissions that would be generated by construction of the proposed project was amortized over the operational life of the project to represent long-term impacts, which for this project is assumed to be 30 years.

Sources of GHG emissions during project operation include automobile trips associated with landscaping equipment, water use, and waste generation. A transportation analysis estimated that the proposed project would generate up to 328 daily vehicle trips. Mobile source emissions were estimated using EMFAC emission rates in CalEEMod. Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors, provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use were selected for this analysis. Emissions related to water usage and wastewater generation were calculated using CalEEMod emission

[6]SCAQMD, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

inventory model which multiplies an estimate of the water usage by the applicable energy intensity factor to determine the embodied energy necessary to supply potable water. GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, the emissions are generally indirect emissions from the production of electricity to power these systems. GHG emissions are then calculated based on the amount of electricity consumed multiplied by the GHG intensity factors for the local utility provider.

Impact Assessment

[a] Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? ***(Less-than-Significant Impact)***

Implementation of the proposed project would generate both direct and indirect GHG emissions. Temporary direct GHG emissions would be generated from the use of off-road equipment and truck/worker vehicle trips during construction activities. Mandatory compliance with SCAQMD regulations that restrict vehicle idling and ensure optimal equipment operating conditions would prevent the occurrence of excessive GHG emissions from these sources. The SCAQMD recommends that temporary GHG emissions associated with construction of CEQA projects be amortized over the operational life of the project to reflect the cumulative nature of climate change implications, which for this project is assumed to be 30 years. Construction of the proposed project would generate approximately 232.1 $MTCO_2e$ during Phase 1, 153.2 $MTCO_2e$ during Phase 2, and 285.8 $MTCO_2e$ during Phase 3, for a total of 671.1 $MTCO_2e$. **Table 4** shows that combined, amortized construction and operational emissions would result in 512.4 $MTCO_2e$ annually of GHG emissions. Emissions would not exceed the SCAQMD draft interim significance threshold of 3,000 $MTCO_2e$. Therefore, the proposed project would result in a less-than-significant impact related to GHG emissions.

TABLE 4: PROPOSED PROJECT ANNUAL GREENHOUSE GAS EMISSIONS

Emissions Source	Annual Emissions (Metric Tons per Year)
Construction Emissions Amortized (Direct)	22.4
Operational Area Source Emissions (Direct)	<0.1
Operational Energy Source Emissions (Indirect)	126.9
Operational Mobile Source Emissions (Direct)	251.5
Operational Waste Disposal Emissions (Indirect)	97.7
Operational Water Distribution Emissions (Indirect)	13.9
TOTAL	**512.4**
SCAQMD Draft Interim Significance Threshold	3,000
Exceed Threshold?	**No**

SOURCE: TAHA, 2022.

Mitigation Measures

No mitigation measures are required.

[b] Would the proposed project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? ***(Less-Than-Significant-Impact)***

The proposed project involves expanding an existing parish school in addition to relocating and constructing a new church, rectory, convent, and gymnasium near the existing school in order to develop a cohesive parish campus. This type of small infill development would not interfere with State, regional, or local plans prepared to reduce GHG emissions.

AB 32 requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions and directs CARB to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill sets a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. On December 11, 2008, CARB adopted the Scoping Plan, which sets forth the framework for facilitating the state's goal of reducing GHG emissions to 1990 levels by 2020. The First Update of the Scoping Plan was adopted on May 22, 2014. CARB adopted the 2017 Scoping Plan in November 2017, which details strategies to cut back 40 percent of GHGs by 2030. AB 32, the updated first Scoping Plan, and the 2017 Scoping Plan did not establish regulations implementing, for specific projects, the Legislature's statewide goals for reducing GHGs. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions, including expanding energy efficiency programs, increasing electricity production from renewable resources (at least 33 percent of the statewide electricity mix), and increasing automobile efficiency, implementing the Low-Carbon Fuel Standard, and developing a cap-and-trade program. These measures are designed to be implemented by state agencies. The proposed project would not interfere with implementation of AB 32 and measures contained within the Scoping Plan to reduce GHG emissions.

The California legislature enacted SB 375 in 2008 to set regional targets for the reduction of GHG emissions and to require the preparation of Sustainable Communities Strategies by metropolitan planning organizations. SB 743 was enacted in 2013 to evolve the assessment of transportation impacts under CEQA, and SB 743 was incorporated into the CEQA Guidelines in 2018 by promulgating the use of vehicle miles traveled and vehicle miles traveled reductions as a significance threshold metric. The proposed project would generate up to 328 daily vehicle trips. Projects that generate less than 500 daily trips are considered small project by the City with the presumption of a less-than-significant impact related to vehicle miles traveled. The proposed project would not have the potential to conflict with the regional GHG emissions targets and vehicle miles traveled reduction efforts of SB 375 and SB 743, respectively.

The proposed project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in E.O. S-03-05 and SB 32, or the carbon neutrality goal for 2045 identified in E.O. B-55-18. E.O. S-03-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40 percent below 1990 levels by December 31, 2030. E.O. B-55-18 establishes an additional statewide policy goal to achieve carbon neutrality as soon as possible and no later

than 2045 and to achieve and maintain net negative emissions thereafter. The proposed project would incorporate energy-efficiency, sustainability, and water-efficiency standards required by the Long Beach Municipal Code. Therefore, the proposed project would result in a less than significant impact related to conflict with GHG reduction plans.

Mitigation Measures

No mitigation measures are required.

References

California Air Resources Board, *California Greenhouse Gas Emission Inventory - 2021 Edition*, December 2021.

California Air Resources Board, *California Greenhouse Gas Inventory for 2000-2019 – Trends of Emissions and Other Indicators*, July 2021.

California Air Resources Board, *California Greenhouse Gas Inventory for 2000-2015 – Trends of Emissions and Other Indicators*, June 2017.

California Air Resources Board, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.

California Air Resources Board, *Global Warming Potentials*, https://www.arb.ca.gov/cc/inventory/background/gwp.htm, accessed on December 8, 2020.

California Environmental Protection Agency Climate Action Team, *Climate Action Report to Governor Schwarzenegger and the California Legislator*, March 2006.

California Environmental Quality Act Guidelines Section 15064.4.

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

South Coast Air Quality Management District, *SCAQMD Air Quality Significance Thresholds*, April 2019.

Southern California Association of Governments, *Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy*, May 2020.

TECHNICAL APPENDIX

California Emission Estimator Model (CalEEMod) Output Files

- Phase 1 CalEEMod Output – Annual
- Phase 2 CalEEMod Output – Annual
- Phase 3 CalEEMod Output – Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish Church and School - Phase 1

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	19.38	1000sqft	0.40	19,378.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 1 site plan indicates 0.40 acres of ground disturbance.

Construction Phase - Phase 1 schedule provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Trips and VMT - Project specific construction trips.

Demolition -

Grading -

Vehicle Trips - Trip rate calculated by dividing 205 daily trips by 19.38 kSF.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	5.00	15.00
tblLandUse	LandUseSquareFeet	19,380.00	19,378.00
tblLandUse	LotAcreage	0.44	0.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripNumber	8.00	160.00
tblTripsAndVMT	VendorTripNumber	3.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblVehicleTrips	WD_TR	19.52	10.58

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0318	0.3250	0.4787	9.1000e-004	0.0226	0.0123	0.0350	5.6800e-003	0.0115	0.0172	0.0000	82.1204	82.1204	0.0176	2.3400e-003	83.2587
2024	0.1315	0.4310	0.7125	1.3100e-003	0.0293	0.0148	0.0441	7.9300e-003	0.0137	0.0216	0.0000	117.1613	117.1613	0.0268	3.0200e-003	118.7314
Maximum	**0.1315**	**0.4310**	**0.7125**	**1.3100e-003**	**0.0293**	**0.0148**	**0.0441**	**7.9300e-003**	**0.0137**	**0.0216**	**0.0000**	**117.1613**	**117.1613**	**0.0268**	**3.0200e-003**	**118.7314**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0318	0.3250	0.4787	9.1000e-004	0.0209	0.0123	0.0332	5.4800e-003	0.0115	0.0169	0.0000	82.1203	82.1203	0.0176	2.3400e-003	83.2586
2024	0.1315	0.4310	0.7125	1.3100e-003	0.0293	0.0148	0.0441	7.9300e-003	0.0137	0.0216	0.0000	117.1612	117.1612	0.0268	3.0200e-003	118.7314
Maximum	**0.1315**	**0.4310**	**0.7125**	**1.3100e-003**	**0.0293**	**0.0148**	**0.0441**	**7.9300e-003**	**0.0137**	**0.0216**	**0.0000**	**117.1612**	**117.1612**	**0.0268**	**3.0200e-003**	**118.7314**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**3.31**	**0.00**	**2.17**	**1.47**	**0.00**	**0.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-1-2023**	**10-31-2023**	0.2031	0.2031
2	**11-1-2023**	**1-31-2024**	0.2216	0.2216
3	**2-1-2024**	**4-30-2024**	0.2105	0.2105
4	**5-1-2024**	**7-31-2024**	0.2156	0.2156
5	**8-1-2024**	**9-30-2024**	0.0450	0.0450
		Highest	0.2216	0.2216

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0790	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Energy	1.0800e-003	9.7900e-003	8.2300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	30.3875	30.3875	1.8700e-003	4.0000e-004	30.5526
Mobile	0.0781	0.0901	0.8165	1.7900e-003	0.1896	1.3100e-003	0.1909	0.0506	1.2200e-003	0.0518	0.0000	165.6112	165.6112	0.0113	7.1700e-003	168.0310
Waste						0.0000	0.0000		0.0000	0.0000	5.1133	0.0000	5.1133	0.3022	0.0000	12.6681
Water						0.0000	0.0000		0.0000	0.0000	0.1783	4.1449	4.3232	0.0187	4.7000e-004	4.9312
Total	**0.1582**	**0.0999**	**0.8250**	**1.8500e-003**	**0.1896**	**2.0500e-003**	**0.1917**	**0.0506**	**1.9600e-003**	**0.0526**	**5.2916**	**200.1440**	**205.4357**	**0.3341**	**8.0400e-003**	**216.1834**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0790	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Energy	1.0800e-003	9.7900e-003	8.2300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	30.3875	30.3875	1.8700e-003	4.0000e-004	30.5526
Mobile	0.0781	0.0901	0.8165	1.7900e-003	0.1896	1.3100e-003	0.1909	0.0506	1.2200e-003	0.0518	0.0000	165.6112	165.6112	0.0113	7.1700e-003	168.0310
Waste						0.0000	0.0000		0.0000	0.0000	5.1133	0.0000	5.1133	0.3022	0.0000	12.6681
Water						0.0000	0.0000		0.0000	0.0000	0.1783	4.1449	4.3232	0.0187	4.7000e-004	4.9312
Total	**0.1582**	**0.0999**	**0.8250**	**1.8500e-003**	**0.1896**	**2.0500e-003**	**0.1917**	**0.0506**	**1.9600e-003**	**0.0526**	**5.2916**	**200.1440**	**205.4357**	**0.3341**	**8.0400e-003**	**216.1834**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2023	8/28/2023	5	20	
2	Site Preparation	Site Preparation	9/4/2023	9/22/2023	5	15	
3	Building Construction	Building Construction	9/25/2023	6/28/2024	5	200	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	7/1/2024	7/19/2024	5	15	
5	Architectural Coating	Architectural Coating	7/22/2024	8/9/2024	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 29,067; Non-Residential Outdoor: 9,689; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	1.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31
Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	0.00	160.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	3	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	30.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1600e-003	0.0553	0.0729	1.2000e-004		2.6700e-003	2.6700e-003		2.5600e-003	2.5600e-003	0.0000	10.3402	10.3402	1.8700e-003	0.0000	10.3870
Total	**6.1600e-003**	**0.0553**	**0.0729**	**1.2000e-004**	**8.2000e-004**	**2.6700e-003**	**3.4900e-003**	**1.2000e-004**	**2.5600e-003**	**2.6800e-003**	**0.0000**	**10.3402**	**10.3402**	**1.8700e-003**	**0.0000**	**10.3870**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	0.0110	2.8000e-003	5.0000e-005	1.3800e-003	7.0000e-005	1.4400e-003	3.8000e-004	6.0000e-005	4.4000e-004	0.0000	4.6662	4.6662	2.6000e-004	7.4000e-004	4.8934
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	5.0000e-004	6.8100e-003	2.0000e-005	2.1900e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.7445	1.7445	5.0000e-005	5.0000e-005	1.7592
Total	**8.0000e-004**	**0.0115**	**9.6100e-003**	**7.0000e-005**	**3.5700e-003**	**8.0000e-005**	**3.6500e-003**	**9.6000e-004**	**7.0000e-005**	**1.0300e-003**	**0.0000**	**6.4106**	**6.4106**	**3.1000e-004**	**7.9000e-004**	**6.6526**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1600e-003	0.0553	0.0729	1.2000e-004		2.6700e-003	2.6700e-003		2.5600e-003	2.5600e-003	0.0000	10.3402	10.3402	1.8700e-003	0.0000	10.3870
Total	**6.1600e-003**	**0.0553**	**0.0729**	**1.2000e-004**	**3.2000e-004**	**2.6700e-003**	**2.9900e-003**	**5.0000e-005**	**2.5600e-003**	**2.6100e-003**	**0.0000**	**10.3402**	**10.3402**	**1.8700e-003**	**0.0000**	**10.3870**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	0.0110	2.8000e-003	5.0000e-005	1.3800e-003	7.0000e-005	1.4400e-003	3.8000e-004	6.0000e-005	4.4000e-004	0.0000	4.6662	4.6662	2.6000e-004	7.4000e-004	4.8934
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	5.0000e-004	6.8100e-003	2.0000e-005	2.1900e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.7445	1.7445	5.0000e-005	5.0000e-005	1.7592
Total	**8.0000e-004**	**0.0115**	**9.6100e-003**	**7.0000e-005**	**3.5700e-003**	**8.0000e-005**	**3.6500e-003**	**9.6000e-004**	**7.0000e-005**	**1.0300e-003**	**0.0000**	**6.4106**	**6.4106**	**3.1000e-004**	**7.9000e-004**	**6.6526**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9900e-003	0.0000	1.9900e-003	2.1000e-004	0.0000	2.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6500e-003	0.0394	0.0377	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	6.1704	6.1704	2.0000e-003	0.0000	6.2203
Total	**3.6500e-003**	**0.0394**	**0.0377**	**7.0000e-005**	**1.9900e-003**	**1.7400e-003**	**3.7300e-003**	**2.1000e-004**	**1.6000e-003**	**1.8100e-003**	**0.0000**	**6.1704**	**6.1704**	**2.0000e-003**	**0.0000**	**6.2203**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.8000e-004	5.1100e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3084	1.3084	3.0000e-005	3.0000e-005	1.3194
Total	**4.8000e-004**	**3.8000e-004**	**5.1100e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3084**	**1.3084**	**3.0000e-005**	**3.0000e-005**	**1.3194**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8000e-004	0.0000	7.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6500e-003	0.0394	0.0377	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	6.1704	6.1704	2.0000e-003	0.0000	6.2203
Total	**3.6500e-003**	**0.0394**	**0.0377**	**7.0000e-005**	**7.8000e-004**	**1.7400e-003**	**2.5200e-003**	**8.0000e-005**	**1.6000e-003**	**1.6800e-003**	**0.0000**	**6.1704**	**6.1704**	**2.0000e-003**	**0.0000**	**6.2203**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.8000e-004	5.1100e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3084	1.3084	3.0000e-005	3.0000e-005	1.3194
Total	**4.8000e-004**	**3.8000e-004**	**5.1100e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3084**	**1.3084**	**3.0000e-005**	**3.0000e-005**	**1.3194**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0168	0.1961	0.3102	4.5000e-004		7.6800e-003	7.6800e-003		7.0600e-003	7.0600e-003	0.0000	39.8229	39.8229	0.0129	0.0000	40.1449
Total	**0.0168**	**0.1961**	**0.3102**	**4.5000e-004**		**7.6800e-003**	**7.6800e-003**		**7.0600e-003**	**7.0600e-003**	**0.0000**	**39.8229**	**39.8229**	**0.0129**	**0.0000**	**40.1449**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0198	7.3900e-003	9.0000e-005	3.0900e-003	9.0000e-005	3.1800e-003	8.9000e-004	9.0000e-005	9.8000e-004	0.0000	8.9093	8.9093	3.0000e-004	1.2800e-003	9.2988
Worker	3.3300e-003	2.6500e-003	0.0358	1.0000e-004	0.0115	7.0000e-005	0.0116	3.0600e-003	6.0000e-005	3.1200e-003	0.0000	9.1586	9.1586	2.4000e-004	2.4000e-004	9.2357
Total	**3.8800e-003**	**0.0224**	**0.0432**	**1.9000e-004**	**0.0146**	**1.6000e-004**	**0.0148**	**3.9500e-003**	**1.5000e-004**	**4.1000e-003**	**0.0000**	**18.0679**	**18.0679**	**5.4000e-004**	**1.5200e-003**	**18.5345**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0168	0.1961	0.3102	4.5000e-004		7.6800e-003	7.6800e-003		7.0600e-003	7.0600e-003	0.0000	39.8229	39.8229	0.0129	0.0000	40.1449
Total	**0.0168**	**0.1961**	**0.3102**	**4.5000e-004**		**7.6800e-003**	**7.6800e-003**		**7.0600e-003**	**7.0600e-003**	**0.0000**	**39.8229**	**39.8229**	**0.0129**	**0.0000**	**40.1449**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0198	7.3900e-003	9.0000e-005	3.0900e-003	9.0000e-005	3.1800e-003	8.9000e-004	9.0000e-005	9.8000e-004	0.0000	8.9093	8.9093	3.0000e-004	1.2800e-003	9.2988
Worker	3.3300e-003	2.6500e-003	0.0358	1.0000e-004	0.0115	7.0000e-005	0.0116	3.0600e-003	6.0000e-005	3.1200e-003	0.0000	9.1586	9.1586	2.4000e-004	2.4000e-004	9.2357
Total	**3.8800e-003**	**0.0224**	**0.0432**	**1.9000e-004**	**0.0146**	**1.6000e-004**	**0.0148**	**3.9500e-003**	**1.5000e-004**	**4.1000e-003**	**0.0000**	**18.0679**	**18.0679**	**5.4000e-004**	**1.5200e-003**	**18.5345**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0300	0.3483	0.5768	8.4000e-004		0.0128	0.0128		0.0117	0.0117	0.0000	73.9695	73.9695	0.0239	0.0000	74.5676
Total	**0.0300**	**0.3483**	**0.5768**	**8.4000e-004**		**0.0128**	**0.0128**		**0.0117**	**0.0117**	**0.0000**	**73.9695**	**73.9695**	**0.0239**	**0.0000**	**74.5676**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-003	0.0368	0.0134	1.7000e-004	5.7400e-003	1.8000e-004	5.9100e-003	1.6600e-003	1.7000e-004	1.8200e-003	0.0000	16.2976	16.2976	5.6000e-004	2.3500e-003	17.0111
Worker	5.7700e-003	4.3800e-003	0.0618	1.8000e-004	0.0214	1.3000e-004	0.0215	5.6800e-003	1.2000e-004	5.7900e-003	0.0000	16.5278	16.5278	4.1000e-004	4.1000e-004	16.6607
Total	**6.7700e-003**	**0.0411**	**0.0752**	**3.5000e-004**	**0.0271**	**3.1000e-004**	**0.0274**	**7.3400e-003**	**2.9000e-004**	**7.6100e-003**	**0.0000**	**32.8254**	**32.8254**	**9.7000e-004**	**2.7600e-003**	**33.6718**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0300	0.3483	0.5768	8.4000e-004		0.0128	0.0128		0.0117	0.0117	0.0000	73.9695	73.9695	0.0239	0.0000	74.5675
Total	**0.0300**	**0.3483**	**0.5768**	**8.4000e-004**		**0.0128**	**0.0128**		**0.0117**	**0.0117**	**0.0000**	**73.9695**	**73.9695**	**0.0239**	**0.0000**	**74.5675**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-003	0.0368	0.0134	1.7000e-004	5.7400e-003	1.8000e-004	5.9100e-003	1.6600e-003	1.7000e-004	1.8200e-003	0.0000	16.2976	16.2976	5.6000e-004	2.3500e-003	17.0111
Worker	5.7700e-003	4.3800e-003	0.0618	1.8000e-004	0.0214	1.3000e-004	0.0215	5.6800e-003	1.2000e-004	5.7900e-003	0.0000	16.5278	16.5278	4.1000e-004	4.1000e-004	16.6607
Total	**6.7700e-003**	**0.0411**	**0.0752**	**3.5000e-004**	**0.0271**	**3.1000e-004**	**0.0274**	**7.3400e-003**	**2.9000e-004**	**7.6100e-003**	**0.0000**	**32.8254**	**32.8254**	**9.7000e-004**	**2.7600e-003**	**33.6718**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8200e-003	0.0256	0.0346	6.0000e-005		1.2200e-003	1.2200e-003		1.1400e-003	1.1400e-003	0.0000	4.7384	4.7384	1.4200e-003	0.0000	4.7738
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8200e-003**	**0.0256**	**0.0346**	**6.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.1400e-003**	**1.1400e-003**	**0.0000**	**4.7384**	**4.7384**	**1.4200e-003**	**0.0000**	**4.7738**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.4200e-003	8.9000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0746	1.0746	4.0000e-005	1.5000e-004	1.1216
Worker	2.2000e-004	1.7000e-004	2.3800e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6357	0.6357	2.0000e-005	2.0000e-005	0.6408
Total	**2.9000e-004**	**2.5900e-003**	**3.2700e-003**	**2.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2200e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.7103**	**1.7103**	**6.0000e-005**	**1.7000e-004**	**1.7624**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8200e-003	0.0256	0.0346	6.0000e-005		1.2200e-003	1.2200e-003		1.1400e-003	1.1400e-003	0.0000	4.7384	4.7384	1.4200e-003	0.0000	4.7738
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8200e-003**	**0.0256**	**0.0346**	**6.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.1400e-003**	**1.1400e-003**	**0.0000**	**4.7384**	**4.7384**	**1.4200e-003**	**0.0000**	**4.7738**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.4200e-003	8.9000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0746	1.0746	4.0000e-005	1.5000e-004	1.1216
Worker	2.2000e-004	1.7000e-004	2.3800e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6357	0.6357	2.0000e-005	2.0000e-005	0.6408
Total	**2.9000e-004**	**2.5900e-003**	**3.2700e-003**	**2.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2200e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.7103**	**1.7103**	**6.0000e-005**	**1.7000e-004**	**1.7624**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0898					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5500e-003	0.0121	0.0197	3.0000e-005		5.1000e-004	5.1000e-004		5.0000e-004	5.0000e-004	0.0000	2.7448	2.7448	3.8000e-004	0.0000	2.7542
Total	**0.0914**	**0.0121**	**0.0197**	**3.0000e-005**		**5.1000e-004**	**5.1000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**2.7448**	**2.7448**	**3.8000e-004**	**0.0000**	**2.7542**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.2100e-003	4.4000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5373	0.5373	2.0000e-005	8.0000e-005	0.5608
Worker	2.2000e-004	1.7000e-004	2.3800e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6357	0.6357	2.0000e-005	2.0000e-005	0.6408
Total	**2.5000e-004**	**1.3800e-003**	**2.8200e-003**	**2.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.1730**	**1.1730**	**4.0000e-005**	**1.0000e-004**	**1.2016**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0898					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5500e-003	0.0121	0.0197	3.0000e-005		5.1000e-004	5.1000e-004		5.0000e-004	5.0000e-004	0.0000	2.7448	2.7448	3.8000e-004	0.0000	2.7542
Total	**0.0914**	**0.0121**	**0.0197**	**3.0000e-005**		**5.1000e-004**	**5.1000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**2.7448**	**2.7448**	**3.8000e-004**	**0.0000**	**2.7542**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.2100e-003	4.4000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5373	0.5373	2.0000e-005	8.0000e-005	0.5608
Worker	2.2000e-004	1.7000e-004	2.3800e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6357	0.6357	2.0000e-005	2.0000e-005	0.6408
Total	**2.5000e-004**	**1.3800e-003**	**2.8200e-003**	**2.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.1730**	**1.1730**	**4.0000e-005**	**1.0000e-004**	**1.2016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0781	0.0901	0.8165	1.7900e-003	0.1896	1.3100e-003	0.1909	0.0506	1.2200e-003	0.0518	0.0000	165.6112	165.6112	0.0113	7.1700e-003	168.0310
Unmitigated	0.0781	0.0901	0.8165	1.7900e-003	0.1896	1.3100e-003	0.1909	0.0506	1.2200e-003	0.0518	0.0000	165.6112	165.6112	0.0113	7.1700e-003	168.0310

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	205.04	0.00	0.00	504,749	504,749
Total	205.04	0.00	0.00	504,749	504,749

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.7261	19.7261	1.6600e-003	2.0000e-004	19.8279
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.7261	19.7261	1.6600e-003	2.0000e-004	19.8279
NaturalGas Mitigated	1.0800e-003	9.7900e-003	8.2300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6614	10.6614	2.0000e-004	2.0000e-004	10.7248
NaturalGas Unmitigated	1.0800e-003	9.7900e-003	8.2300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6614	10.6614	2.0000e-004	2.0000e-004	10.7248

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	199787	1.0800e-003	9.7900e-003	8.2300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6614	10.6614	2.0000e-004	2.0000e-004	10.7248
Total		**1.0800e-003**	**9.7900e-003**	**8.2300e-003**	**6.0000e-005**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**10.6614**	**10.6614**	**2.0000e-004**	**2.0000e-004**	**10.7248**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	199787	1.0800e-003	9.7900e-003	8.2300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.6614	10.6614	2.0000e-004	2.0000e-004	10.7248
Total		**1.0800e-003**	**9.7900e-003**	**8.2300e-003**	**6.0000e-005**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**10.6614**	**10.6614**	**2.0000e-004**	**2.0000e-004**	**10.7248**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	111230	19.7261	1.6600e-003	2.0000e-004	19.8279
Total		**19.7261**	**1.6600e-003**	**2.0000e-004**	**19.8279**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	111230	19.7261	1.6600e-003	2.0000e-004	19.8279
Total		**19.7261**	**1.6600e-003**	**2.0000e-004**	**19.8279**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0790	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Unmitigated	0.0790	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0700					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Total	**0.0790**	**0.0000**	**2.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.8000e-004**	**4.8000e-004**	**0.0000**	**0.0000**	**5.1000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0700					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Total	**0.0790**	**0.0000**	**2.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.8000e-004**	**4.8000e-004**	**0.0000**	**0.0000**	**5.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.3232	0.0187	4.7000e-004	4.9312
Unmitigated	4.3232	0.0187	4.7000e-004	4.9312

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.56196 / 1.44504	4.3232	0.0187	4.7000e-004	4.9312
Total		**4.3232**	**0.0187**	**4.7000e-004**	**4.9312**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.56196 / 1.44504	4.3232	0.0187	4.7000e-004	4.9312
Total		**4.3232**	**0.0187**	**4.7000e-004**	**4.9312**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.1133	0.3022	0.0000	12.6681
Unmitigated	5.1133	0.3022	0.0000	12.6681

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	25.19	5.1133	0.3022	0.0000	12.6681
Total		**5.1133**	**0.3022**	**0.0000**	**12.6681**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	25.19	5.1133	0.3022	0.0000	12.6681
Total		**5.1133**	**0.3022**	**0.0000**	**12.6681**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish School and Church - Phase 2

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	63.00	Space	0.57	25,200.00	0
Health Club	9.41	1000sqft	0.22	9,410.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Schedule provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Off-road Equipment - Equipment inventory provided by applicant.

Off-road Equipment - Construction equipment inventory provided by applicant.

Off-road Equipment - Equipment inventory and construction schedule provided by applicant.

Trips and VMT - Project construction trips provided by applicant.

Demolition -

Grading -

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating -

Vehicle Trips - Gym facility will not generate additional vehicle trips.

Area Coating -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	1.00	15.00
tblConstructionPhase	NumDays	100.00	125.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	9/20/2024	10/4/2024
tblConstructionPhase	PhaseEndDate	9/23/2024	10/25/2024
tblConstructionPhase	PhaseEndDate	2/10/2025	4/25/2025
tblConstructionPhase	PhaseEndDate	2/17/2025	4/25/2025
tblConstructionPhase	PhaseEndDate	2/24/2025	4/25/2025
tblConstructionPhase	PhaseStartDate	9/21/2024	10/7/2024
tblConstructionPhase	PhaseStartDate	9/24/2024	11/4/2024
tblConstructionPhase	PhaseStartDate	2/11/2025	4/7/2025
tblConstructionPhase	PhaseStartDate	2/18/2025	4/7/2025
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	HaulingTripNumber	60.00	240.00
tblTripsAndVMT	VendorTripNumber	6.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	40.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	WD_TR	32.93	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0252	0.2489	0.3673	7.4000e-004	0.0274	8.9700e-003	0.0364	6.2800e-003	8.3400e-003	0.0146	0.0000	66.9609	66.9609	0.0134	2.1400e-003	67.9332
2025	0.0770	0.2891	0.5081	9.4000e-004	0.0241	9.2400e-003	0.0333	6.4900e-003	8.5500e-003	0.0150	0.0000	84.1901	84.1901	0.0188	2.0600e-003	85.2719
Maximum	**0.0770**	**0.2891**	**0.5081**	**9.4000e-004**	**0.0274**	**9.2400e-003**	**0.0364**	**6.4900e-003**	**8.5500e-003**	**0.0150**	**0.0000**	**84.1901**	**84.1901**	**0.0188**	**2.1400e-003**	**85.2719**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0252	0.2489	0.3673	7.4000e-004	0.0222	8.9700e-003	0.0312	5.5400e-003	8.3400e-003	0.0139	0.0000	66.9608	66.9608	0.0134	2.1400e-003	67.9332
2025	0.0770	0.2891	0.5081	9.4000e-004	0.0241	9.2400e-003	0.0333	6.4900e-003	8.5500e-003	0.0150	0.0000	84.1900	84.1900	0.0188	2.0600e-003	85.2718
Maximum	**0.0770**	**0.2891**	**0.5081**	**9.4000e-004**	**0.0241**	**9.2400e-003**	**0.0333**	**6.4900e-003**	**8.5500e-003**	**0.0150**	**0.0000**	**84.1900**	**84.1900**	**0.0188**	**2.1400e-003**	**85.2718**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**10.11**	**0.00**	**7.45**	**5.79**	**0.00**	**2.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-9-2024**	**12-8-2024**	0.2037	0.2037
2	**12-9-2024**	**3-8-2025**	0.2158	0.2158
3	**3-9-2025**	**6-8-2025**	0.1960	0.1960
		Highest	0.2158	0.2158

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0404	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9100e-003
Energy	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	28.7063	28.7063	1.8300e-003	3.7000e-004	28.8614
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	10.8884	0.0000	10.8884	0.6435	0.0000	26.9756
Water						0.0000	0.0000		0.0000	0.0000	0.1766	1.9572	2.1338	0.0183	4.5000e-004	2.7249
Total	**0.0413**	**8.2900e-003**	**7.8800e-003**	**5.0000e-005**	**0.0000**	**6.3000e-004**	**6.3000e-004**	**0.0000**	**6.3000e-004**	**6.3000e-004**	**11.0650**	**30.6653**	**41.7303**	**0.6636**	**8.2000e-004**	**58.5639**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0404	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9100e-003
Energy	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	28.7063	28.7063	1.8300e-003	3.7000e-004	28.8614
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	10.8884	0.0000	10.8884	0.6435	0.0000	26.9756
Water						0.0000	0.0000		0.0000	0.0000	0.1766	1.9572	2.1338	0.0183	4.5000e-004	2.7249
Total	**0.0413**	**8.2900e-003**	**7.8800e-003**	**5.0000e-005**	**0.0000**	**6.3000e-004**	**6.3000e-004**	**0.0000**	**6.3000e-004**	**6.3000e-004**	**11.0650**	**30.6653**	**41.7303**	**0.6636**	**8.2000e-004**	**58.5639**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/9/2024	10/4/2024	5	20	
2	Site Preparation	Site Preparation	10/7/2024	10/25/2024	5	15	
3	Building Construction	Building Construction	11/4/2024	4/25/2025	5	125	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	4/7/2025	4/25/2025	5	15	
5	Architectural Coating	Architectural Coating	4/7/2025	4/25/2025	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 14,115; Non-Residential Outdoor: 4,705; Striped Parking Area: 1,512 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	2.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31
Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	30.00	0.00	240.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	40.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.5200e-003	0.0000	6.5200e-003	9.9000e-004	0.0000	9.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3500e-003	0.0577	0.0755	1.3000e-004		2.5600e-003	2.5600e-003		2.4500e-003	2.4500e-003	0.0000	11.2035	11.2035	2.1400e-003	0.0000	11.2570
Total	**6.3500e-003**	**0.0577**	**0.0755**	**1.3000e-004**	**6.5200e-003**	**2.5600e-003**	**9.0800e-003**	**9.9000e-004**	**2.4500e-003**	**3.4400e-003**	**0.0000**	**11.2035**	**11.2035**	**2.1400e-003**	**0.0000**	**11.2570**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	0.0165	4.2800e-003	7.0000e-005	2.0600e-003	1.0000e-004	2.1600e-003	5.7000e-004	1.0000e-004	6.6000e-004	0.0000	6.9002	6.9002	3.9000e-004	1.1000e-003	7.2365
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	6.7000e-004	9.5000e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.5427	2.5427	6.0000e-005	6.0000e-005	2.5632
Total	**1.1400e-003**	**0.0172**	**0.0138**	**1.0000e-004**	**5.3500e-003**	**1.2000e-004**	**5.4700e-003**	**1.4400e-003**	**1.2000e-004**	**1.5500e-003**	**0.0000**	**9.4429**	**9.4429**	**4.5000e-004**	**1.1600e-003**	**9.7997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5400e-003	0.0000	2.5400e-003	3.9000e-004	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3500e-003	0.0577	0.0755	1.3000e-004		2.5600e-003	2.5600e-003		2.4500e-003	2.4500e-003	0.0000	11.2035	11.2035	2.1400e-003	0.0000	11.2570
Total	**6.3500e-003**	**0.0577**	**0.0755**	**1.3000e-004**	**2.5400e-003**	**2.5600e-003**	**5.1000e-003**	**3.9000e-004**	**2.4500e-003**	**2.8400e-003**	**0.0000**	**11.2035**	**11.2035**	**2.1400e-003**	**0.0000**	**11.2570**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	0.0165	4.2800e-003	7.0000e-005	2.0600e-003	1.0000e-004	2.1600e-003	5.7000e-004	1.0000e-004	6.6000e-004	0.0000	6.9002	6.9002	3.9000e-004	1.1000e-003	7.2365
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	6.7000e-004	9.5000e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.5427	2.5427	6.0000e-005	6.0000e-005	2.5632
Total	**1.1400e-003**	**0.0172**	**0.0138**	**1.0000e-004**	**5.3500e-003**	**1.2000e-004**	**5.4700e-003**	**1.4400e-003**	**1.2000e-004**	**1.5500e-003**	**0.0000**	**9.4429**	**9.4429**	**4.5000e-004**	**1.1600e-003**	**9.7997**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9900e-003	0.0000	1.9900e-003	2.1000e-004	0.0000	2.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7500e-003	0.0395	0.0418	8.0000e-005		1.6900e-003	1.6900e-003		1.5500e-003	1.5500e-003	0.0000	6.6873	6.6873	2.1600e-003	0.0000	6.7413
Total	**3.7500e-003**	**0.0395**	**0.0418**	**8.0000e-005**	**1.9900e-003**	**1.6900e-003**	**3.6800e-003**	**2.1000e-004**	**1.5500e-003**	**1.7600e-003**	**0.0000**	**6.6873**	**6.6873**	**2.1600e-003**	**0.0000**	**6.7413**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.1000e-004	7.1300e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.9071	1.9071	5.0000e-005	5.0000e-005	1.9224
Total	**6.7000e-004**	**5.1000e-004**	**7.1300e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.5000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9071**	**1.9071**	**5.0000e-005**	**5.0000e-005**	**1.9224**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8000e-004	0.0000	7.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7500e-003	0.0395	0.0418	8.0000e-005		1.6900e-003	1.6900e-003		1.5500e-003	1.5500e-003	0.0000	6.6873	6.6873	2.1600e-003	0.0000	6.7413
Total	**3.7500e-003**	**0.0395**	**0.0418**	**8.0000e-005**	**7.8000e-004**	**1.6900e-003**	**2.4700e-003**	**8.0000e-005**	**1.5500e-003**	**1.6300e-003**	**0.0000**	**6.6873**	**6.6873**	**2.1600e-003**	**0.0000**	**6.7413**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.1000e-004	7.1300e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.9071	1.9071	5.0000e-005	5.0000e-005	1.9224
Total	**6.7000e-004**	**5.1000e-004**	**7.1300e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.5000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9071**	**1.9071**	**5.0000e-005**	**5.0000e-005**	**1.9224**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.1201	0.1981	2.9000e-004		4.4700e-003	4.4700e-003		4.1100e-003	4.1100e-003	0.0000	25.3351	25.3351	8.1900e-003	0.0000	25.5399
Total	**0.0104**	**0.1201**	**0.1981**	**2.9000e-004**		**4.4700e-003**	**4.4700e-003**		**4.1100e-003**	**4.1100e-003**	**0.0000**	**25.3351**	**25.3351**	**8.1900e-003**	**0.0000**	**25.5399**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	0.0119	4.3400e-003	5.0000e-005	1.8500e-003	6.0000e-005	1.9100e-003	5.3000e-004	5.0000e-005	5.9000e-004	0.0000	5.2654	5.2654	1.8000e-004	7.6000e-004	5.4959
Worker	2.4900e-003	1.8900e-003	0.0266	8.0000e-005	9.2000e-003	5.0000e-005	9.2600e-003	2.4400e-003	5.0000e-005	2.4900e-003	0.0000	7.1197	7.1197	1.8000e-004	1.8000e-004	7.1769
Total	**2.8100e-003**	**0.0138**	**0.0310**	**1.3000e-004**	**0.0111**	**1.1000e-004**	**0.0112**	**2.9700e-003**	**1.0000e-004**	**3.0800e-003**	**0.0000**	**12.3851**	**12.3851**	**3.6000e-004**	**9.4000e-004**	**12.6728**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.1201	0.1981	2.9000e-004		4.4700e-003	4.4700e-003		4.1100e-003	4.1100e-003	0.0000	25.3351	25.3351	8.1900e-003	0.0000	25.5399
Total	**0.0104**	**0.1201**	**0.1981**	**2.9000e-004**		**4.4700e-003**	**4.4700e-003**		**4.1100e-003**	**4.1100e-003**	**0.0000**	**25.3351**	**25.3351**	**8.1900e-003**	**0.0000**	**25.5399**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	0.0119	4.3400e-003	5.0000e-005	1.8500e-003	6.0000e-005	1.9100e-003	5.3000e-004	5.0000e-005	5.9000e-004	0.0000	5.2654	5.2654	1.8000e-004	7.6000e-004	5.4959
Worker	2.4900e-003	1.8900e-003	0.0266	8.0000e-005	9.2000e-003	5.0000e-005	9.2600e-003	2.4400e-003	5.0000e-005	2.4900e-003	0.0000	7.1197	7.1197	1.8000e-004	1.8000e-004	7.1769
Total	**2.8100e-003**	**0.0138**	**0.0310**	**1.3000e-004**	**0.0111**	**1.1000e-004**	**0.0112**	**2.9700e-003**	**1.0000e-004**	**3.0800e-003**	**0.0000**	**12.3851**	**12.3851**	**3.6000e-004**	**9.4000e-004**	**12.6728**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0192	0.2230	0.3907	5.7000e-004		7.4300e-003	7.4300e-003		6.8400e-003	6.8400e-003	0.0000	50.0875	50.0875	0.0162	0.0000	50.4925
Total	**0.0192**	**0.2230**	**0.3907**	**5.7000e-004**		**7.4300e-003**	**7.4300e-003**		**6.8400e-003**	**6.8400e-003**	**0.0000**	**50.0875**	**50.0875**	**0.0162**	**0.0000**	**50.4925**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	0.0234	8.4200e-003	1.0000e-004	3.6600e-003	1.1000e-004	3.7800e-003	1.0600e-003	1.1000e-004	1.1700e-003	0.0000	10.2182	10.2182	3.6000e-004	1.4700e-003	10.6660
Worker	4.6000e-003	3.3500e-003	0.0489	1.5000e-004	0.0182	1.0000e-004	0.0183	4.8300e-003	9.0000e-005	4.9200e-003	0.0000	13.5918	13.5918	3.1000e-004	3.3000e-004	13.6971
Total	**5.2200e-003**	**0.0267**	**0.0574**	**2.5000e-004**	**0.0219**	**2.1000e-004**	**0.0221**	**5.8900e-003**	**2.0000e-004**	**6.0900e-003**	**0.0000**	**23.8099**	**23.8099**	**6.7000e-004**	**1.8000e-003**	**24.3631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0192	0.2230	0.3907	5.7000e-004		7.4300e-003	7.4300e-003		6.8400e-003	6.8400e-003	0.0000	50.0874	50.0874	0.0162	0.0000	50.4924
Total	**0.0192**	**0.2230**	**0.3907**	**5.7000e-004**		**7.4300e-003**	**7.4300e-003**		**6.8400e-003**	**6.8400e-003**	**0.0000**	**50.0874**	**50.0874**	**0.0162**	**0.0000**	**50.4924**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2000e-004	0.0234	8.4200e-003	1.0000e-004	3.6600e-003	1.1000e-004	3.7800e-003	1.0600e-003	1.1000e-004	1.1700e-003	0.0000	10.2182	10.2182	3.6000e-004	1.4700e-003	10.6660
Worker	4.6000e-003	3.3500e-003	0.0489	1.5000e-004	0.0182	1.0000e-004	0.0183	4.8300e-003	9.0000e-005	4.9200e-003	0.0000	13.5918	13.5918	3.1000e-004	3.3000e-004	13.6971
Total	**5.2200e-003**	**0.0267**	**0.0574**	**2.5000e-004**	**0.0219**	**2.1000e-004**	**0.0221**	**5.8900e-003**	**2.0000e-004**	**6.0900e-003**	**0.0000**	**23.8099**	**23.8099**	**6.7000e-004**	**1.8000e-003**	**24.3631**

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7000e-003	0.0240	0.0346	6.0000e-005		1.1200e-003	1.1200e-003		1.0500e-003	1.0500e-003	0.0000	4.7369	4.7369	1.4200e-003	0.0000	4.7723
Paving	7.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4500e-003**	**0.0240**	**0.0346**	**6.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**4.7369**	**4.7369**	**1.4200e-003**	**0.0000**	**4.7723**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.4100e-003	8.7000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0552	1.0552	4.0000e-005	1.5000e-004	1.1015
Worker	2.1000e-004	1.5000e-004	2.2100e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6141	0.6141	1.0000e-005	1.0000e-005	0.6188
Total	**2.7000e-004**	**2.5600e-003**	**3.0800e-003**	**2.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2200e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.6693**	**1.6693**	**5.0000e-005**	**1.6000e-004**	**1.7203**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7000e-003	0.0240	0.0346	6.0000e-005		1.1200e-003	1.1200e-003		1.0500e-003	1.0500e-003	0.0000	4.7368	4.7368	1.4200e-003	0.0000	4.7723
Paving	7.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4500e-003**	**0.0240**	**0.0346**	**6.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**4.7368**	**4.7368**	**1.4200e-003**	**0.0000**	**4.7723**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.4100e-003	8.7000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0552	1.0552	4.0000e-005	1.5000e-004	1.1015
Worker	2.1000e-004	1.5000e-004	2.2100e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6141	0.6141	1.0000e-005	1.0000e-005	0.6188
Total	**2.7000e-004**	**2.5600e-003**	**3.0800e-003**	**2.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2200e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.6693**	**1.6693**	**5.0000e-005**	**1.6000e-004**	**1.7203**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4700e-003	0.0115	0.0197	3.0000e-005		4.4000e-004	4.4000e-004		4.3000e-004	4.3000e-004	0.0000	2.7448	2.7448	3.7000e-004	0.0000	2.7541
Total	**0.0486**	**0.0115**	**0.0197**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**2.7448**	**2.7448**	**3.7000e-004**	**0.0000**	**2.7541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.2100e-003	4.3000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5276	0.5276	2.0000e-005	8.0000e-005	0.5507
Worker	2.1000e-004	1.5000e-004	2.2100e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6141	0.6141	1.0000e-005	1.0000e-005	0.6188
Total	**2.4000e-004**	**1.3600e-003**	**2.6400e-003**	**2.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.1417**	**1.1417**	**3.0000e-005**	**9.0000e-005**	**1.1696**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4700e-003	0.0115	0.0197	3.0000e-005		4.4000e-004	4.4000e-004		4.3000e-004	4.3000e-004	0.0000	2.7448	2.7448	3.7000e-004	0.0000	2.7541
Total	**0.0486**	**0.0115**	**0.0197**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**2.7448**	**2.7448**	**3.7000e-004**	**0.0000**	**2.7541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.2100e-003	4.3000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5276	0.5276	2.0000e-005	8.0000e-005	0.5507
Worker	2.1000e-004	1.5000e-004	2.2100e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6141	0.6141	1.0000e-005	1.0000e-005	0.6188
Total	**2.4000e-004**	**1.3600e-003**	**2.6400e-003**	**2.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.1417**	**1.1417**	**3.0000e-005**	**9.0000e-005**	**1.1696**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.6876	19.6876	1.6600e-003	2.0000e-004	19.7892
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.6876	19.6876	1.6600e-003	2.0000e-004	19.7892
NaturalGas Mitigated	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0187	9.0187	1.7000e-004	1.7000e-004	9.0723
NaturalGas Unmitigated	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0187	9.0187	1.7000e-004	1.7000e-004	9.0723

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Health Club	169004	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0187	9.0187	1.7000e-004	1.7000e-004	9.0723
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.1000e-004**	**8.2800e-003**	**6.9600e-003**	**5.0000e-005**		**6.3000e-004**	**6.3000e-004**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**9.0187**	**9.0187**	**1.7000e-004**	**1.7000e-004**	**9.0723**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Health Club	169004	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0187	9.0187	1.7000e-004	1.7000e-004	9.0723
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.1000e-004**	**8.2800e-003**	**6.9600e-003**	**5.0000e-005**		**6.3000e-004**	**6.3000e-004**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**9.0187**	**9.0187**	**1.7000e-004**	**1.7000e-004**	**9.0723**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	102193	18.1234	1.5300e-003	1.9000e-004	18.2169
Parking Lot	8820	1.5642	1.3000e-004	2.0000e-005	1.5723
Total		**19.6876**	**1.6600e-003**	**2.1000e-004**	**19.7892**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	102193	18.1234	1.5300e-003	1.9000e-004	18.2169
Parking Lot	8820	1.5642	1.3000e-004	2.0000e-005	1.5723
Total		**19.6876**	**1.6600e-003**	**2.1000e-004**	**19.7892**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0404	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9100e-003
Unmitigated	0.0404	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.7100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0356					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9100e-003
Total	**0.0404**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-003**	**1.8000e-003**	**0.0000**	**0.0000**	**1.9100e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.7100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0356					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-003	1.8000e-003	0.0000	0.0000	1.9100e-003
Total	**0.0404**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-003**	**1.8000e-003**	**0.0000**	**0.0000**	**1.9100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1338	0.0183	4.5000e-004	2.7249
Unmitigated	2.1338	0.0183	4.5000e-004	2.7249

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	0.556537 / 0.341103	2.1338	0.0183	4.5000e-004	2.7249
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.1338**	**0.0183**	**4.5000e-004**	**2.7249**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	0.556537 / 0.341103	2.1338	0.0183	4.5000e-004	2.7249
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.1338**	**0.0183**	**4.5000e-004**	**2.7249**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.8884	0.6435	0.0000	26.9756
Unmitigated	10.8884	0.6435	0.0000	26.9756

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	53.64	10.8884	0.6435	0.0000	26.9756
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**10.8884**	**0.6435**	**0.0000**	**26.9756**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	53.64	10.8884	0.6435	0.0000	26.9756
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**10.8884**	**0.6435**	**0.0000**	**26.9756**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Holy Innocents Parish Church and School - Phase 3

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.68	1000sqft	0.04	1,680.00	0
Place of Worship	19.53	1000sqft	0.45	19,532.00	0
Parking Lot	27.00	Space	0.24	10,800.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	3,433.00	3
Single Family Housing	1.00	Dwelling Unit	0.32	3,298.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 3 construction plans provided by applicant.

Construction Phase - Construction schedule provided by applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Construction equipment inventory provided by applicant.

Off-road Equipment -

Off-road Equipment - Construction equipment inventory provided by applicant.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - Construction trip schedule provided by applicant.

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - Operational phase vehicle trips provided by applicant.

Woodstoves - Project design plans indicate no hearths.

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	NumDays	200.00	285.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	10.00	15.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1.70	0.00
tblFireplaces	NumberNoFireplace	0.20	0.00
tblFireplaces	NumberWood	0.10	0.00
tblLandUse	LandUseSquareFeet	19,530.00	19,532.00
tblLandUse	LandUseSquareFeet	1,800.00	3,433.00
tblLandUse	LandUseSquareFeet	1,800.00	3,298.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblTripsAndVMT	HaulingTripNumber	29.00	240.00
tblTripsAndVMT	VendorTripNumber	5.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	14.00	40.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	5.99	6.30
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	27.63	6.30
tblVehicleTrips	SU_TR	8.55	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	6.95	6.30
tblVehicleTrips	WD_TR	9.44	0.00
tblWoodstoves	NumberCatalytic	0.10	0.00
tblWoodstoves	NumberNoncatalytic	0.10	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	7.6100e-003	0.0763	0.0995	2.4000e-004	8.4500e-003	2.5100e-003	0.0110	1.9100e-003	2.3900e-003	4.3000e-003	0.0000	21.8103	21.8103	3.0200e-003	1.1400e-003	22.2243
2026	0.0696	0.7130	1.2620	2.3500e-003	0.0674	0.0218	0.0892	0.0178	0.0201	0.0379	0.0000	211.3434	211.3434	0.0481	5.0900e-003	214.0628
2027	0.1383	0.1695	0.2918	5.5000e-004	0.0143	5.5100e-003	0.0198	3.8600e-003	5.1100e-003	8.9800e-003	0.0000	48.8959	48.8959	0.0107	1.1900e-003	49.5190
Maximum	**0.1383**	**0.7130**	**1.2620**	**2.3500e-003**	**0.0674**	**0.0218**	**0.0892**	**0.0178**	**0.0201**	**0.0379**	**0.0000**	**211.3434**	**211.3434**	**0.0481**	**5.0900e-003**	**214.0628**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	7.6100e-003	0.0763	0.0995	2.4000e-004	6.5600e-003	2.5100e-003	9.0700e-003	1.6200e-003	2.3900e-003	4.0100e-003	0.0000	21.8103	21.8103	3.0200e-003	1.1400e-003	22.2243
2026	0.0696	0.7130	1.2620	2.3500e-003	0.0662	0.0218	0.0880	0.0177	0.0201	0.0378	0.0000	211.3432	211.3432	0.0481	5.0900e-003	214.0626
2027	0.1383	0.1695	0.2918	5.5000e-004	0.0143	5.5100e-003	0.0198	3.8600e-003	5.1100e-003	8.9800e-003	0.0000	48.8958	48.8958	0.0107	1.1900e-003	49.5189
Maximum	**0.1383**	**0.7130**	**1.2620**	**2.3500e-003**	**0.0662**	**0.0218**	**0.0880**	**0.0177**	**0.0201**	**0.0378**	**0.0000**	**211.3432**	**211.3432**	**0.0481**	**5.0900e-003**	**214.0626**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**3.45**	**0.00**	**2.58**	**1.78**	**0.00**	**0.82**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**12-1-2025**	**2-28-2026**	0.1734	0.1734
2	**3-1-2026**	**5-31-2026**	0.2037	0.2037
3	**6-1-2026**	**8-31-2026**	0.2033	0.2033
4	**9-1-2026**	**11-30-2026**	0.2019	0.2019
5	**12-1-2026**	**2-28-2027**	0.1998	0.1998
6	**3-1-2027**	**5-31-2027**	0.1605	0.1605
		Highest	0.2037	0.2037

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1144	2.4000e-004	0.0212	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0349	0.0349	4.0000e-005	0.0000	0.0358
Energy	2.2600e-003	0.0204	0.0162	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	67.1646	67.1646	4.2100e-003	8.7000e-004	67.5286
Mobile	0.0482	0.0474	0.4345	8.9000e-004	0.0986	6.6000e-004	0.0993	0.0263	6.2000e-004	0.0269	0.0000	82.1077	82.1077	6.3500e-003	3.9000e-003	83.4287
Waste						0.0000	0.0000		0.0000	0.0000	23.4130	0.0000	23.4130	1.3837	0.0000	58.0047
Water						0.0000	0.0000		0.0000	0.0000	0.3299	4.8072	5.1371	0.0343	8.5000e-004	6.2475
Total	**0.1649**	**0.0680**	**0.4719**	**1.0100e-003**	**0.0986**	**2.3400e-003**	**0.1010**	**0.0263**	**2.3000e-003**	**0.0286**	**23.7429**	**154.1144**	**177.8573**	**1.4286**	**5.6200e-003**	**215.2453**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1144	2.4000e-004	0.0212	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0349	0.0349	4.0000e-005	0.0000	0.0358
Energy	2.2600e-003	0.0204	0.0162	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	67.1646	67.1646	4.2100e-003	8.7000e-004	67.5286
Mobile	0.0482	0.0474	0.4345	8.9000e-004	0.0986	6.6000e-004	0.0993	0.0263	6.2000e-004	0.0269	0.0000	82.1077	82.1077	6.3500e-003	3.9000e-003	83.4287
Waste						0.0000	0.0000		0.0000	0.0000	23.4130	0.0000	23.4130	1.3837	0.0000	58.0047
Water						0.0000	0.0000		0.0000	0.0000	0.3299	4.8072	5.1371	0.0343	8.5000e-004	6.2475
Total	**0.1649**	**0.0680**	**0.4719**	**1.0100e-003**	**0.0986**	**2.3400e-003**	**0.1010**	**0.0263**	**2.3000e-003**	**0.0286**	**23.7429**	**154.1144**	**177.8573**	**1.4286**	**5.6200e-003**	**215.2453**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2025	12/26/2025	5	20	
2	Site Preparation	Site Preparation	1/5/2026	1/23/2026	5	15	
3	Building Construction	Building Construction	2/2/2026	3/5/2027	5	285	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	3/8/2027	3/26/2027	5	15	
5	Architectural Coating	Architectural Coating	3/29/2027	4/16/2027	5	15	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.24

Residential Indoor: 13,630; Residential Outdoor: 4,543; Non-Residential Indoor: 31,818; Non-Residential Outdoor: 10,606; Striped Parking Area: 648 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Crawler Tractors	1	2.00	212	0.43
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Crawler Tractors	1	4.00	212	0.43
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	7.00	63	0.31
Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	30.00	0.00	240.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	40.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1000e-003	0.0000	3.1000e-003	4.7000e-004	0.0000	4.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5300e-003	0.0593	0.0863	1.4000e-004		2.4000e-003	2.4000e-003		2.2800e-003	2.2800e-003	0.0000	12.5767	12.5767	2.5700e-003	0.0000	12.6408
Total	**6.5300e-003**	**0.0593**	**0.0863**	**1.4000e-004**	**3.1000e-003**	**2.4000e-003**	**5.5000e-003**	**4.7000e-004**	**2.2800e-003**	**2.7500e-003**	**0.0000**	**12.5767**	**12.5767**	**2.5700e-003**	**0.0000**	**12.6408**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	0.0164	4.3300e-003	7.0000e-005	2.0600e-003	1.0000e-004	2.1600e-003	5.7000e-004	1.0000e-004	6.6000e-004	0.0000	6.7773	6.7773	3.9000e-004	1.0800e-003	7.1081
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	6.1000e-004	8.8400e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.4563	2.4563	6.0000e-005	6.0000e-005	2.4754
Total	**1.0800e-003**	**0.0171**	**0.0132**	**1.0000e-004**	**5.3500e-003**	**1.2000e-004**	**5.4700e-003**	**1.4400e-003**	**1.2000e-004**	**1.5500e-003**	**0.0000**	**9.2336**	**9.2336**	**4.5000e-004**	**1.1400e-003**	**9.5835**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2100e-003	0.0000	1.2100e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5300e-003	0.0593	0.0863	1.4000e-004		2.4000e-003	2.4000e-003		2.2800e-003	2.2800e-003	0.0000	12.5767	12.5767	2.5700e-003	0.0000	12.6408
Total	**6.5300e-003**	**0.0593**	**0.0863**	**1.4000e-004**	**1.2100e-003**	**2.4000e-003**	**3.6100e-003**	**1.8000e-004**	**2.2800e-003**	**2.4600e-003**	**0.0000**	**12.5767**	**12.5767**	**2.5700e-003**	**0.0000**	**12.6408**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	0.0164	4.3300e-003	7.0000e-005	2.0600e-003	1.0000e-004	2.1600e-003	5.7000e-004	1.0000e-004	6.6000e-004	0.0000	6.7773	6.7773	3.9000e-004	1.0800e-003	7.1081
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	6.1000e-004	8.8400e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.4563	2.4563	6.0000e-005	6.0000e-005	2.4754
Total	**1.0800e-003**	**0.0171**	**0.0132**	**1.0000e-004**	**5.3500e-003**	**1.2000e-004**	**5.4700e-003**	**1.4400e-003**	**1.2000e-004**	**1.5500e-003**	**0.0000**	**9.2336**	**9.2336**	**4.5000e-004**	**1.1400e-003**	**9.5835**

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9900e-003	0.0000	1.9900e-003	2.1000e-004	0.0000	2.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3800e-003	0.0349	0.0413	8.0000e-005		1.3900e-003	1.3900e-003		1.2800e-003	1.2800e-003	0.0000	6.6899	6.6899	2.1600e-003	0.0000	6.7440
Total	**3.3800e-003**	**0.0349**	**0.0413**	**8.0000e-005**	**1.9900e-003**	**1.3900e-003**	**3.3800e-003**	**2.1000e-004**	**1.2800e-003**	**1.4900e-003**	**0.0000**	**6.6899**	**6.6899**	**2.1600e-003**	**0.0000**	**6.7440**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	6.2200e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.7863	1.7863	4.0000e-005	4.0000e-005	1.7997
Total	**5.9000e-004**	**4.1000e-004**	**6.2200e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.5000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.7863**	**1.7863**	**4.0000e-005**	**4.0000e-005**	**1.7997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8000e-004	0.0000	7.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3800e-003	0.0349	0.0413	8.0000e-005		1.3900e-003	1.3900e-003		1.2800e-003	1.2800e-003	0.0000	6.6899	6.6899	2.1600e-003	0.0000	6.7440
Total	**3.3800e-003**	**0.0349**	**0.0413**	**8.0000e-005**	**7.8000e-004**	**1.3900e-003**	**2.1700e-003**	**8.0000e-005**	**1.2800e-003**	**1.3600e-003**	**0.0000**	**6.6899**	**6.6899**	**2.1600e-003**	**0.0000**	**6.7440**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	6.2200e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.7863	1.7863	4.0000e-005	4.0000e-005	1.7997
Total	**5.9000e-004**	**4.1000e-004**	**6.2200e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.5000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.7863**	**1.7863**	**4.0000e-005**	**4.0000e-005**	**1.7997**

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0515	0.6022	1.0583	1.5500e-003		0.0198	0.0198		0.0182	0.0182	0.0000	136.0415	136.0415	0.0440	0.0000	137.1414
Total	**0.0515**	**0.6022**	**1.0583**	**1.5500e-003**		**0.0198**	**0.0198**		**0.0182**	**0.0182**	**0.0000**	**136.0415**	**136.0415**	**0.0440**	**0.0000**	**137.1414**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7300e-003	0.0667	0.0239	3.0000e-004	0.0105	3.3000e-004	0.0109	3.0400e-003	3.1000e-004	3.3600e-003	0.0000	28.8777	28.8777	1.0300e-003	4.1600e-003	30.1446
Worker	0.0125	8.7500e-003	0.1322	4.1000e-004	0.0524	2.8000e-004	0.0527	0.0139	2.6000e-004	0.0142	0.0000	37.9481	37.9481	8.2000e-004	8.9000e-004	38.2331
Total	**0.0142**	**0.0755**	**0.1561**	**7.1000e-004**	**0.0629**	**6.1000e-004**	**0.0635**	**0.0170**	**5.7000e-004**	**0.0175**	**0.0000**	**66.8258**	**66.8258**	**1.8500e-003**	**5.0500e-003**	**68.3777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0515	0.6022	1.0583	1.5500e-003		0.0198	0.0198		0.0182	0.0182	0.0000	136.0413	136.0413	0.0440	0.0000	137.1413
Total	**0.0515**	**0.6022**	**1.0583**	**1.5500e-003**		**0.0198**	**0.0198**		**0.0182**	**0.0182**	**0.0000**	**136.0413**	**136.0413**	**0.0440**	**0.0000**	**137.1413**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7300e-003	0.0667	0.0239	3.0000e-004	0.0105	3.3000e-004	0.0109	3.0400e-003	3.1000e-004	3.3600e-003	0.0000	28.8777	28.8777	1.0300e-003	4.1600e-003	30.1446
Worker	0.0125	8.7500e-003	0.1322	4.1000e-004	0.0524	2.8000e-004	0.0527	0.0139	2.6000e-004	0.0142	0.0000	37.9481	37.9481	8.2000e-004	8.9000e-004	38.2331
Total	**0.0142**	**0.0755**	**0.1561**	**7.1000e-004**	**0.0629**	**6.1000e-004**	**0.0635**	**0.0170**	**5.7000e-004**	**0.0175**	**0.0000**	**66.8258**	**66.8258**	**1.8500e-003**	**5.0500e-003**	**68.3777**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9100e-003	0.1159	0.2037	3.0000e-004		3.8100e-003	3.8100e-003		3.5000e-003	3.5000e-003	0.0000	26.1837	26.1837	8.4700e-003	0.0000	26.3954
Total	**9.9100e-003**	**0.1159**	**0.2037**	**3.0000e-004**		**3.8100e-003**	**3.8100e-003**		**3.5000e-003**	**3.5000e-003**	**0.0000**	**26.1837**	**26.1837**	**8.4700e-003**	**0.0000**	**26.3954**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	0.0128	4.5500e-003	6.0000e-005	2.0300e-003	6.0000e-005	2.0900e-003	5.9000e-004	6.0000e-005	6.5000e-004	0.0000	5.4487	5.4487	2.0000e-004	7.9000e-004	5.6881
Worker	2.2600e-003	1.5400e-003	0.0240	8.0000e-005	0.0101	5.0000e-005	0.0101	2.6800e-003	5.0000e-005	2.7200e-003	0.0000	7.1011	7.1011	1.4000e-004	1.6000e-004	7.1530
Total	**2.5900e-003**	**0.0143**	**0.0286**	**1.4000e-004**	**0.0121**	**1.1000e-004**	**0.0122**	**3.2700e-003**	**1.1000e-004**	**3.3700e-003**	**0.0000**	**12.5498**	**12.5498**	**3.4000e-004**	**9.5000e-004**	**12.8410**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9100e-003	0.1159	0.2037	3.0000e-004		3.8100e-003	3.8100e-003		3.5000e-003	3.5000e-003	0.0000	26.1837	26.1837	8.4700e-003	0.0000	26.3954
Total	**9.9100e-003**	**0.1159**	**0.2037**	**3.0000e-004**		**3.8100e-003**	**3.8100e-003**		**3.5000e-003**	**3.5000e-003**	**0.0000**	**26.1837**	**26.1837**	**8.4700e-003**	**0.0000**	**26.3954**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	0.0128	4.5500e-003	6.0000e-005	2.0300e-003	6.0000e-005	2.0900e-003	5.9000e-004	6.0000e-005	6.5000e-004	0.0000	5.4487	5.4487	2.0000e-004	7.9000e-004	5.6881
Worker	2.2600e-003	1.5400e-003	0.0240	8.0000e-005	0.0101	5.0000e-005	0.0101	2.6800e-003	5.0000e-005	2.7200e-003	0.0000	7.1011	7.1011	1.4000e-004	1.6000e-004	7.1530
Total	**2.5900e-003**	**0.0143**	**0.0286**	**1.4000e-004**	**0.0121**	**1.1000e-004**	**0.0122**	**3.2700e-003**	**1.1000e-004**	**3.3700e-003**	**0.0000**	**12.5498**	**12.5498**	**3.4000e-004**	**9.5000e-004**	**12.8410**

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7000e-003	0.0240	0.0346	6.0000e-005		1.1200e-003	1.1200e-003		1.0500e-003	1.0500e-003	0.0000	4.7369	4.7369	1.4200e-003	0.0000	4.7723
Paving	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0100e-003**	**0.0240**	**0.0346**	**6.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**4.7369**	**4.7369**	**1.4200e-003**	**0.0000**	**4.7723**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.3800e-003	8.5000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0153	1.0153	4.0000e-005	1.5000e-004	1.0599
Worker	1.8000e-004	1.3000e-004	1.9600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5789	0.5789	1.0000e-005	1.0000e-005	0.5831
Total	**2.4000e-004**	**2.5100e-003**	**2.8100e-003**	**2.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2200e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.5942**	**1.5942**	**5.0000e-005**	**1.6000e-004**	**1.6430**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7000e-003	0.0240	0.0346	6.0000e-005		1.1200e-003	1.1200e-003		1.0500e-003	1.0500e-003	0.0000	4.7368	4.7368	1.4200e-003	0.0000	4.7723
Paving	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.0100e-003**	**0.0240**	**0.0346**	**6.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**4.7368**	**4.7368**	**1.4200e-003**	**0.0000**	**4.7723**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.3800e-003	8.5000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0153	1.0153	4.0000e-005	1.5000e-004	1.0599
Worker	1.8000e-004	1.3000e-004	1.9600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5789	0.5789	1.0000e-005	1.0000e-005	0.5831
Total	**2.4000e-004**	**2.5100e-003**	**2.8100e-003**	**2.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2200e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.5942**	**1.5942**	**5.0000e-005**	**1.6000e-004**	**1.6430**

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4700e-003	0.0115	0.0197	3.0000e-005		4.4000e-004	4.4000e-004		4.3000e-004	4.3000e-004	0.0000	2.7448	2.7448	3.7000e-004	0.0000	2.7541
Total	**0.1224**	**0.0115**	**0.0197**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**2.7448**	**2.7448**	**3.7000e-004**	**0.0000**	**2.7541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.1900e-003	4.2000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5076	0.5076	2.0000e-005	7.0000e-005	0.5299
Worker	1.8000e-004	1.3000e-004	1.9600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5789	0.5789	1.0000e-005	1.0000e-005	0.5831
Total	**2.1000e-004**	**1.3200e-003**	**2.3800e-003**	**2.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.0865**	**1.0865**	**3.0000e-005**	**8.0000e-005**	**1.1131**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4700e-003	0.0115	0.0197	3.0000e-005		4.4000e-004	4.4000e-004		4.3000e-004	4.3000e-004	0.0000	2.7448	2.7448	3.7000e-004	0.0000	2.7541
Total	**0.1224**	**0.0115**	**0.0197**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**2.7448**	**2.7448**	**3.7000e-004**	**0.0000**	**2.7541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	1.1900e-003	4.2000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5076	0.5076	2.0000e-005	7.0000e-005	0.5299
Worker	1.8000e-004	1.3000e-004	1.9600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5789	0.5789	1.0000e-005	1.0000e-005	0.5831
Total	**2.1000e-004**	**1.3200e-003**	**2.3800e-003**	**2.0000e-005**	**1.0100e-003**	**1.0000e-005**	**1.0200e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.0865**	**1.0865**	**3.0000e-005**	**8.0000e-005**	**1.1131**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0482	0.0474	0.4345	8.9000e-004	0.0986	6.6000e-004	0.0993	0.0263	6.2000e-004	0.0269	0.0000	82.1077	82.1077	6.3500e-003	3.9000e-003	83.4287
Unmitigated	0.0482	0.0474	0.4345	8.9000e-004	0.0986	6.6000e-004	0.0993	0.0263	6.2000e-004	0.0269	0.0000	82.1077	82.1077	6.3500e-003	3.9000e-003	83.4287

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Place of Worship	123.04	123.04	123.04	262,416	262,416
Single Family Housing	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	123.04	123.04	123.04	262,416	262,416

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Parking Lot	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Place of Worship	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318
Single Family Housing	0.537891	0.065289	0.189998	0.126515	0.023567	0.006518	0.011114	0.008084	0.000933	0.000591	0.025474	0.000708	0.003318

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	44.7999	44.7999	3.7800e-003	4.6000e-004	45.0310
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	44.7999	44.7999	3.7800e-003	4.6000e-004	45.0310
NaturalGas Mitigated	2.2600e-003	0.0204	0.0162	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3648	22.3648	4.3000e-004	4.1000e-004	22.4977
NaturalGas Unmitigated	2.2600e-003	0.0204	0.0162	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3648	22.3648	4.3000e-004	4.1000e-004	22.4977

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	17320.8	9.0000e-005	8.5000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9243	0.9243	2.0000e-005	2.0000e-005	0.9298
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	350795	1.8900e-003	0.0172	0.0144	1.0000e-004		1.3100e-003	1.3100e-003		1.3100e-003	1.3100e-003	0.0000	18.7197	18.7197	3.6000e-004	3.4000e-004	18.8310
Single Family Housing	25492.1	2.7000e-004	2.3500e-003	1.0000e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7207	2.7207	5.0000e-005	5.0000e-005	2.7369
Total		**2.2500e-003**	**0.0204**	**0.0162**	**1.2000e-004**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**22.3648**	**22.3648**	**4.3000e-004**	**4.1000e-004**	**22.4977**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	17320.8	9.0000e-005	8.5000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9243	0.9243	2.0000e-005	2.0000e-005	0.9298
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	350795	1.8900e-003	0.0172	0.0144	1.0000e-004		1.3100e-003	1.3100e-003		1.3100e-003	1.3100e-003	0.0000	18.7197	18.7197	3.6000e-004	3.4000e-004	18.8310
Single Family Housing	25492.1	2.7000e-004	2.3500e-003	1.0000e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7207	2.7207	5.0000e-005	5.0000e-005	2.7369
Total		**2.2500e-003**	**0.0204**	**0.0162**	**1.2000e-004**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**22.3648**	**22.3648**	**4.3000e-004**	**4.1000e-004**	**22.4977**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	21000	3.7243	3.1000e-004	4.0000e-005	3.7435
Parking Lot	3780	0.6704	6.0000e-005	1.0000e-005	0.6738
Place of Worship	212118	37.6181	3.1800e-003	3.8000e-004	37.8122
Single Family Housing	7857.94	2.7871	2.4000e-004	3.0000e-005	2.8015
Total		**44.7999**	**3.7900e-003**	**4.6000e-004**	**45.0310**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	21000	3.7243	3.1000e-004	4.0000e-005	3.7435
Parking Lot	3780	0.6704	6.0000e-005	1.0000e-005	0.6738
Place of Worship	212118	37.6181	3.1800e-003	3.8000e-004	37.8122
Single Family Housing	7857.94	2.7871	2.4000e-004	3.0000e-005	2.8015
Total		**44.7999**	**3.7900e-003**	**4.6000e-004**	**45.0310**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1144	2.4000e-004	0.0212	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0349	0.0349	4.0000e-005	0.0000	0.0358
Unmitigated	0.1144	2.4000e-004	0.0212	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0349	0.0349	4.0000e-005	0.0000	0.0358

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1017					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.8000e-004	2.4000e-004	0.0212	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0349	0.0349	4.0000e-005	0.0000	0.0358
Total	**0.1144**	**2.4000e-004**	**0.0212**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0349**	**0.0349**	**4.0000e-005**	**0.0000**	**0.0358**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1017					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.8000e-004	2.4000e-004	0.0212	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0349	0.0349	4.0000e-005	0.0000	0.0358
Total	**0.1144**	**2.4000e-004**	**0.0212**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0349**	**0.0349**	**4.0000e-005**	**0.0000**	**0.0358**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.1371	0.0343	8.5000e-004	6.2475
Unmitigated	5.1371	0.0343	8.5000e-004	6.2475

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.298593 / 0.183008	1.1448	9.8200e-003	2.4000e-004	1.4620
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.611072 / 0.95578	3.4882	0.0202	5.0000e-004	4.1430
Single Family Housing	0.130308 / 0.0821507	0.5041	4.2900e-003	1.0000e-004	0.6425
Total		**5.1371**	**0.0343**	**8.4000e-004**	**6.2475**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.298593 / 0.183008	1.1448	9.8200e-003	2.4000e-004	1.4620
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.611072 / 0.95578	3.4882	0.0202	5.0000e-004	4.1430
Single Family Housing	0.130308 / 0.0821507	0.5041	4.2900e-003	1.0000e-004	0.6425
Total		**5.1371**	**0.0343**	**8.4000e-004**	**6.2475**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.4130	1.3837	0.0000	58.0047
Unmitigated	23.4130	1.3837	0.0000	58.0047

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	1.56	0.3167	0.0187	0.0000	0.7845
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	111.32	22.5970	1.3354	0.0000	55.9830
Single Family Housing	2.46	0.4994	0.0295	0.0000	1.2371
Total		**23.4130**	**1.3837**	**0.0000**	**58.0047**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	1.56	0.3167	0.0187	0.0000	0.7845
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	111.32	22.5970	1.3354	0.0000	55.9830
Single Family Housing	2.46	0.4994	0.0295	0.0000	1.2371
Total		**23.4130**	**1.3837**	**0.0000**	**58.0047**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number

11.0 Vegetation

APPENDIX C

Noise and Vibration Analysis

Technical Study

TO: Alexis Oropeza
City of Long Beach
Long Beach Development Services Planning Bureau
411 West Ocean Boulevard, 3rd Floor
Long Beach, CA 90802

FROM: Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
Culver City, CA 90232

DATE: May 26, 2022

RE: **Holy Innocents Parish Church and School Project – Noise and Vibration Assessment**

Introduction

Terry A. Hayes Associates Inc. (TAHA) has completed a Noise and Vibration Assessment for the Holy Innocents Parish Church and School Project (proposed project) in accordance with provisions of California Environmental Quality Act (CEQA) Statutes and Guidelines. It is anticipated that this Assessment will be used to support an Initial Study/Mitigated Negative Declaration for the proposed project. This Assessment is organized as follows:

- Project Description
- Noise and Vibration Topical Information
- Regulatory Framework
- Significance Thresholds and Local Standards
- Methodology
- Existing Setting
- Impact Assessment
- References

Project Description

Holy Innocents Parish has a near century-long history in the City of Long Beach and is the second largest parish in the city. The existing Holy Innocents Parish Church includes an on-site rectory is located at 425 East 20th Street in the City of Long Beach. In 1956, due to limited land area near the existing church location, the Parish purchased a tract of six lots at 25th Street and Pacific Avenue, which would ultimately be the location of the existing Holy Innocents Parish School. The school has operated at this location since 1958 and has grown over the years to serve Transitional Kindergarten to 8th Grade students.

Holy Innocents Parish proposes a three-phased development to expand the existing parish school and relocate and construct a new church, rectory, convent, and gymnasium near the existing school located at 2500 Pacific Avenue in order to develop a cohesive parish campus. **Figure 1** shows the location of the proposed project. The three development phases of the proposed project are as follows:

1. **Phase 1**. Demolition of three one-story wood structures totaling 1,674 square feet (sq. ft.), a metal overhang, the existing playground, and 27 parking stalls. New construction will include a 19,378 sq. ft. two-story school building consisting of eight classrooms, an administration space, and a library. No additional parking is to be constructed at this time with 105 parking spaces to remain. The existing hall and convent will remain. Phase 1 construction is anticipated to begin Summer 2022 and to be completed by Fall 2023.
2. **Phase 2**. Demolition of the 7,812 sq. ft. parish hall located near the east property line and 5,439 sq. ft. corner commercial office building located to the east across the existing alley. A 9,414 sq. ft. single-story gymnasium will be constructed in the northeast corner of the subject site. The gymnasium will include a small kitchen, stage, and restrooms. Phase 2 construction is anticipated to commence in Fall 2024 and complete by Spring 2025.
3. **Phase 3**. Demolition of the 5,193 sq. ft. seven-bedroom convent and 1,100 sq. ft. single-story school office. Construction will include the 19,532 sq. ft. church, 3,433 sq. ft. two-story rectory, 3,298 sq. ft. two-story convent and 1,680 sq. ft. two-story parish office. The church structure will include a single-story assembly area, a basement area with restrooms, storage, and mechanical room, and a choir loft. Phase 3 construction is anticipated to commence in Winter 2026 and complete in Spring 2027.

The proposed development will include the expanded operations of the existing elementary school and the construction of a new gymnasium, church, rectory, and convent. The anticipated hours of operations for the proposed project are as follows:

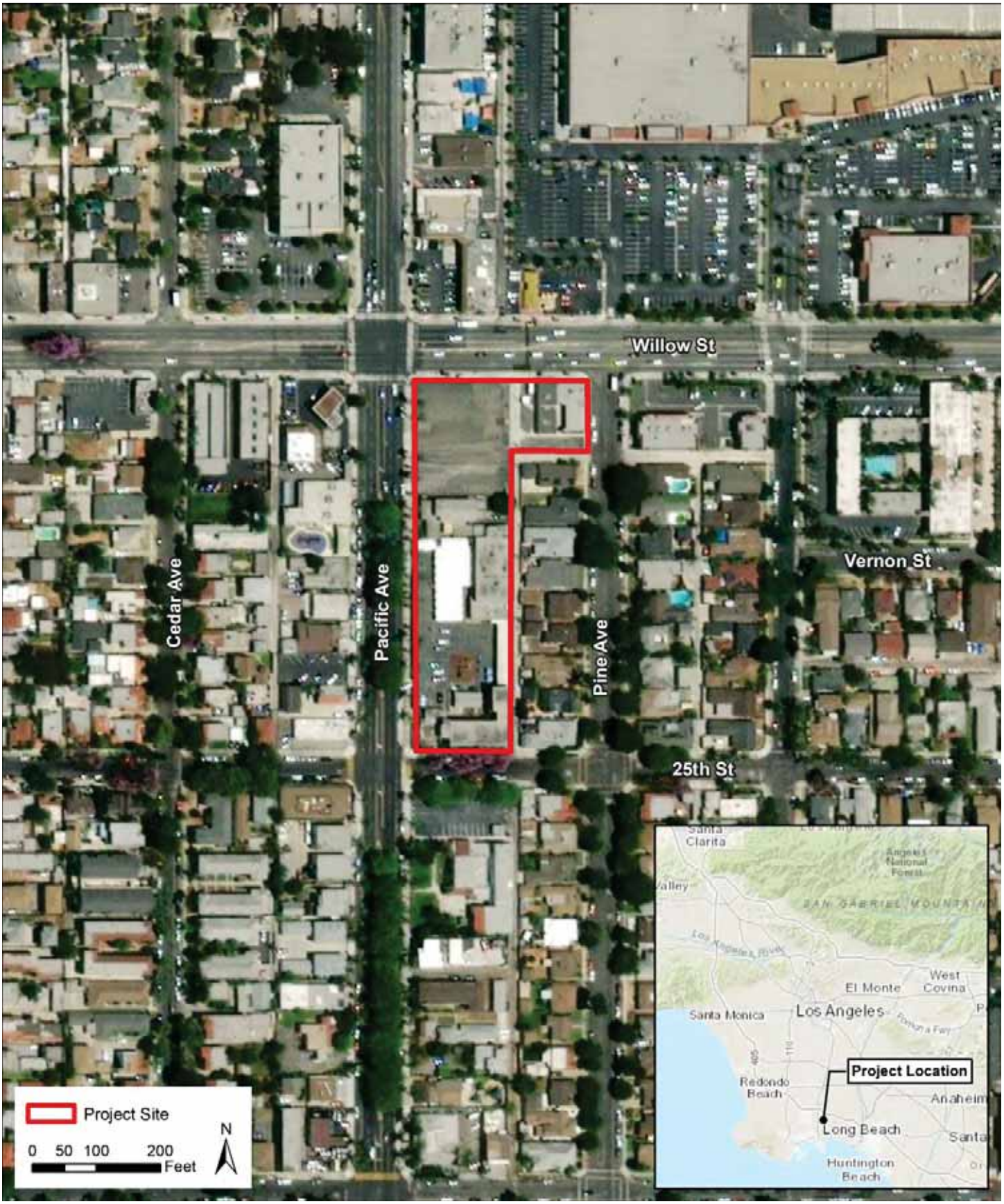
- **Church**: 6:30 am – 8:00 pm;
- **Parish School Office**: Monday – Friday 9:30 am – 3:30 pm; Sunday 10:30 am – 2:00 pm;
- **School**: Monday – Friday 7:30 am – 5:30 pm; and
- **Gymnasium**: 8:00 am – 5:00 pm.

School Operations

The parish school currently offers education for Transitional Kindergarten to 8th Grade. The new school building will enable the parish school to include instruction for 9th through 12th Grade. There will be 22-23 students in each grade level. The student body will be made up of roughly 315 students, 16 teachers, six aids, two facility staff, one main office secretary and one business office staff. The gymnasium will hold a range of events including basketball, volleyball, physical education class, theater, parent/community meetings and events, dances and be used for general cafeteria use.

Church Operations

Weekday masses will be offered at 8:00 am and 7:00 pm, and confessions are scheduled for 7:00 pm on Fridays. Approximately 30-40 people attend weekday masses. Saturday masses are held at 8:00 am and 5:00 pm. Approximately 30-40 people attend the morning mass and approximately 250 attend the evening mass. Weddings and funerals are also scheduled on many Saturdays. Sunday masses run from 7:00 am to 2:00 pm with an hour between each service to allow ample time for attendees to vacate the parking lot before the next group arrives. Approximately 250 people and two to three administrative staff attend Sunday masses. The church will be open ahead of each mass to allow for quiet reflection and prayer.



Source: TAHA, 2022.

Holy Innocents Parish Church and School Project
Noise and Vibration Assessment

TAHA 2021-094

CITY OF LONG BEACH

FIGURE 1

PROJECT LOCATION

Noise and Vibration Topical Information

The standard unit of measurement for noise is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The A-weighted scale, abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. The noise analysis discusses sound levels in terms of Equivalent Noise Level (L_{eq}), L_{50} and Community Noise Equivalent Level (CNEL). L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for one hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. L_{50}, is the noise level for 30 minutes within any hour. The L_{eq} and L_{50} are expressed in units of dBA.

CNEL is an average sound level during a 24-hour period. CNEL is a noise measurement scale, which accounts for noise source, distance, single event duration, single event occurrence, frequency, and time of day. Human reaction to sound between 7:00 pm and 10:00 pm is as if the sound were actually 5 dBA higher than if it occurred from 7:00 am to 7:00 pm. From 10:00 pm to 7:00 am, humans perceive sound as if it were 10 dBA higher due to the lower background level. Hence, the CNEL is obtained by adding an additional 5 dBA to sound levels in the evening from 7:00 pm to 10:00 pm and 10 dBA to sound levels in the night from 10:00 pm to 7:00 am. Because CNEL accounts for human sensitivity to sound, the CNEL is always a higher number than the actual 24-hour average.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," decreases by approximately 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level is 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet over a hard surface.

Noise generated by a mobile source decreases by approximately 3 dBA over hard surfaces and 4.8 dBA over soft surfaces for each doubling of the distance. Generally, noise is most audible when the source is in a direct line-of-sight of the receiver. Barriers, such as walls, berms, or buildings that break the line-of-sight between the source and the receiver greatly reduce noise levels from the source since sound can only reach the receiver by bending over the top of the barrier. However, if a barrier is not sufficiently high or long to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and may evoke a community reaction. A 10-dBA increase is subjectively heard as a doubling in loudness and would likely cause a negative community reaction.

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as rock blasting, pile driving, and heavy earth-moving equipment. High levels of vibration may cause physical personal injury or damage to buildings. However, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that may affect concentration or disturb sleep. In addition, high levels of vibration may damage fragile buildings or interfere with equipment that is highly sensitive to vibration (e.g., electron microscopes).

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The VdB acts to compress the range of numbers required to describe vibration.[1]

Regulatory Framework

The following discussion includes relevant regulations, policies, and programs that have been adopted by federal, state, regional, and local agencies to protect the public from noise and vibration

Noise

Federal. The Noise Control Act of 1972 established programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In 1981, the United States Environmental Protection Agency (USEPA) determined that subjective issues such as noise would be better addressed at local levels of government, thereby allowing more individualized control for specific issues by designated federal, state, and local government agencies. Consequently, in 1982, responsibilities for regulating noise control policies were transferred to specific federal agencies, and state and local governments. However, noise control guidelines and regulations contained in the USEPA rulings in prior years remain in place.

State. The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation. State regulations governing noise levels generated by individual motor vehicles and occupational noise control are not applicable to planning efforts, nor are these areas typically subject to CEQA analysis.

Local. The City of Long Beach has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. Chapter 8.80 of the City of Long Beach Municipal Code (LBMC) sets forth all noise regulations controlling unnecessary, excessive, and annoying noise and vibration in the City. The LBMC has not established a quantitative standard for construction noise, which is instead regulated by allowable hours of construction. LBMC Section 8.80.202 (Construction Activity – Noise Regulations) states that no construction or repair work shall be performed between the hours of 7:00 pm and 7:00 am on Monday through Friday and federal holidays occurring on weekdays, since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment, or other place of residence. Further, no person shall operate or permit the operation of any tools or equipment which produce loud or unusual noise between the hours of 7:00 pm on Friday and 9:00 am on Saturday and after 6:00 pm on Saturday. No person shall conduct construction work on Sunday. A Sunday work permit may be issued by the Noise Control Officer, but only for the hours between 9:00 am and 6:00 pm.

Section 8.80.150 of the LBMC states that exterior noise standards are based on various land use districts and are presented in Section 8.80.160. The proposed project and its immediate surrounding area are located in Noise District One. **Table 1** summarizes the applicable standards for Noise District One. LBMC Section 8.80.160 (C) states that if the measured ambient noise level exceeds the permissible noise limit categories, then the allowable noise exposure standard shall be increased by increments of 5 dB. **Table 2** summarizes the LBMC interior noise standards for various land use districts and types.

[1]FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

TABLE 1: CITY OF LONG BEACH EXTERIOR NOISE LIMITS (DISTRICT ONE)		
Allowable Noise Exposure Duration	**Daytime (7:00 a.m. to 10:00 p.m.)**	**Nighttime (10:00 p.m. to 7:00 a.m.)**
30 Minutes (L_{50})	50 dBA	45 dBA
15 Minutes	55 dBA	50 dBA
5 Minutes	60 dBA	55 dBA
1 Minute	65 dBA	60 dBA
Any period of time	70 dBA	65 dBA
SOURCE: LBMC *Section 8.80.160 Exterior Noise Limits – Correction for Character of Sound*.		

TABLE 2: CITY OF LONG BEACH INTERIOR NOISE LIMITS			
Receiving Land Use District	**Type of Land Use**	**Time Interval**	**Allowable Interior Noise Level (dBA)**
All	Residential	10:00 p.m. to 7:00 a.m. 7:00 a.m. to 10:00 p.m.	35 45
All	School	7:00 a.m. to 10:00 p.m. (While school is in session)	45
Hospital, designated quiet zones and noise sensitive zones	Quiet Zones	Any time	40
SOURCE: LBMC *Section 8.80.170 Interior Noise Limits – Maximum Sound Levels*.			

LBMC Section 8.20.200 (N) (Noise Disturbances – Acts Specific) states that air-conditioning or refrigerating equipment shall not exceed 55 dBA at the nearest property line, 50 dBA at a neighboring patio, or 50 dBA outside the neighboring living area window nearest the equipment location.

LBMC Section 8.80.340 (A) (Variance – Exemption from regulations.) states that a variance may be obtained from a noise control officer to grant an exemption from any provision of Chapter 8.80 of the LBMC.

The City of Long Beach also includes noise regulations within the Noise Element of the General Plan. The Noise Element, adopted in 1975, serves as a comprehensive program for noise control and abatement in Long Beach and includes an action program consisting of various measures that the City may implement in pursuing its noise control plan.

Vibration

Federal. The Federal Transit Administration (FTA) guidance may be used to assess the potential for vibration-related damage and annoyance.[2] For damage, the impact criteria are established based on the structural foundation of the potentially impacted building. Site visits indicate that the buildings near the project site are constructed with non-engineered timber and masonry. Vibration levels that exceed a PPV of 0.2 inches per second could potentially damage these types of buildings.

State. The California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual published April 2020 includes guidance to address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. This manual provides guidelines for assessing vibration damage potential to various types of buildings, ranging from 0.08 to 0.12 inches per second for extremely fragile historic buildings, ruins, and ancient monuments, to 0.50 to 2.0 inches per second for

[2] FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

modern industrial and commercial buildings. The guidance and procedures provided in the Caltrans manual are suitable for use as screening tools for assessing the potential for adverse effects related to human perception and structural damage.

Local. The City has established regulations related to vibration. Section 8.80.200 (G) of the LBMC states that it is a violation to operate or permit the operation of a device that creates vibration which is above the vibration threshold at or beyond the property boundary of the source if on private property or at 150 feet from the source if on public space. The vibration perception threshold is defined as the minimum groundborne vibration necessary to cause a normal person to be aware of the vibration by means such as feeling the vibration or observing vibration-induced motion of other objects. The vibration regulation is approximately 0.001 g's (acceleration from gravity)[3] in the 0 to 30 hertz frequency range and 0.003 g's in the frequency range of 30 to 100 hertz.

Significance Thresholds

This assessment was undertaken to determine whether construction or operation of the proposed project would have the potential to result in significant environmental impacts related to noise or vibration in the context of the Appendix G Environmental Checklist criteria of the CEQA Guidelines. Implementation of the proposed project may result in a significant environmental impact related to noise and vibration if the proposed project would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
b) Generation of excessive ground-borne vibration or ground-borne noise levels; and/or
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.

The proposed project would exceed the local standards and substantially increase temporary construction noise levels if construction activities would occur within 500 feet of a noise-sensitive use and outside the hours allowed in the LBMC. LBMC Section 8.80.202 states that the allowable hours of construction are Monday through Friday 7:00 am to 7:00 pm, Saturday from 9:00 am to 6:00 pm, and no construction on Sundays unless a Sunday work permit was granted by the City's Noise Control Officer.

For permanent operational noise, a significant impact would result if the proposed project would exceed the exterior noise standards set forth in LBMC Section 8.80.160.

A vibration impact would occur if vibration levels generated by the proposed project would exceed the 0.2 inches per second vibration damage criterion.

Methodology

Noise

The noise and vibration analysis consider construction and operational sources. Noise levels associated with typical construction equipment were obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM).[4] This model predicts noise from construction based on a compilation of

[3]One "g" is the acceleration due to gravity at the Earth's surface, approximately 9.8 meters per second squared.
[4]FHWA, *Roadway Construction Noise Model*, Version 1.1, August 2008.

empirical data and the application of acoustical propagation formulas. Maximum equipment noise levels were adjusted based on anticipated percent of use. Combined construction activity noise levels were estimated by combining anticipated equipment for each activity using RCNM. The projected noise level during the construction period at receptors was calculated by making a distance adjustment to the construction source sound level.

According to Caltrans guidance, air temperature and humidity affect molecular absorption differently depending on the frequency spectrum and can vary significantly over long distances in a complex manner. Molecular absorption in air also reduces noise levels with distance. According to Caltrans, this process only accounts for about 1 dBA per 1,000 feet, which is an inaudible and negligible difference in noise levels. Noise levels have been estimated using a decrease of 6 dBA over hard surfaces for each doubling of the distance. The methodology and formulas obtained from the Caltrans Technical Noise Supplement can be viewed below.

Noise Distance Attenuation Formula: $dBA_2 = dBA_1 + 20 \times LOG_{10} (D_1/D_2)$

Where:

dBA_1 = *Noise level at the reference distance of 50 feet*

dBA_2 = *Noise level at the receptor*

D_1 = *Reference distance (50 feet)*

D_2 = *Distance from source to receptor (measured distance)*

Operational stationary noise was assessed for operation of the proposed project and would include noise typically associated with school and church operations. Operational stationary noise would include HVAC equipment noise, parking activity noise, and school and church bells.

Vibration

Vibration levels generated by construction equipment were estimated using example vibration levels and propagation formulas provided by FTA.[5] The following formula was used to assess potential vibration damage at nearby structures.

Vibration Damage Attenuation Formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

Where:

PPV_{equip} = *Peak particles velocity in inches per second of the equipment adjusted for distance*

PPV_{ref} = *Reference vibration level in inches per second at 25 feet*

D = *Distance from the equipment to the receptor in feet*

Existing Setting

[5]FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

The project site is located in the City of Long Beach and includes two zoning classes. The area along Pacific Avenue where the current Holy Innocents School is located is zoned as institutional use, and the area along Willow Street containing an open parking lot and a commercial structure is zoned under Specific Plan – 1.[6] The project site is adjacent to the intersection of Pacific Avenue and Willow Street to the northwest, both of which are major arterial roads.[7] To the north of the project site are commercial use structures. Single-family residences are located immediately to the east of the project site. Iglesia Universal Church is located immediately to the south of the project site, with single-family residences further down along Pine Avenue. Commercial use structures are located immediately to the west of the project site along Pacific Avenue, and single-family residences are located further west along Cedar Avenue.

Sensitive receptors are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. They typically include residences, schools, hospitals, guest lodging, and libraries. The nearest sensitive receptors are single-family residences approximately 20 feet east from the project site across an existing alleyway. A complete list of sensitive receptors located within 500 feet of the project site are shown in **Table 3**. To characterize the existing noise environment around the project site, short-term noise measurements were taken using a SoundPro DL Sound Level Meter. Short-term noise measurements were conducted on Tuesday, November 30, 2021, from 11:30 am to 2:30 pm, in 15-minute increments. This time of day represents a typical construction time without the added noise source of peak hour traffic. Short-term monitored noise levels ranged from 57.1 to 72.1 dBA L_{eq}. Traffic noise along nearby roadways were the primary sources of noise in the project area. Monitoring locations are shown in **Figure 2** and monitored noise levels are shown in **Table 4**.

TABLE 3: SENSITIVE RECEPTORS

Sensitive Receptor	Distance from Project Site (Feet)
Residences along Pine Ave. to the east	20
Iglesia Universal	50
Residences along West 25th St. to the southeast	60
Child Lane Preschool to the west	100
Razalan Lee Medical Group to the west	100
The James S Benedict Child Development Center to the west	100
Pacific Burnett Clinic to the southwest	120
Residences along Pacific Ave. to the southwest	190
Residences along East 25th St. to the southeast	210
Residences along Earl Ave. to the east	180
Residences along Cedar Ave. to the west	230
Pacifica Motel to the west	235
Panacea Health Care Clinic to the north	255
The Cove Hotel, Ascend Hotel Collection to the east	340
Young Horizons Preschool Ludloff Center Preschool to the north	380
Residences along East Vernon Street to the east	470
Young Horizons North Pacific Center Preschool to the south	515
Pacific Medical Center to the north	495

SOURCE: TAHA, 2022.

[6]City of Long Beach, *Zoning*, https://datalb.longbeach.gov/datasets/429114cf9e314736b41703c117a4614e_0/about

[7]City of Long Beach, Public Works Department, *Map Book*, https://longbeach.gov/globalassets/ti/media-library/documents/gis/map-catalog/pw_street_mapbook_oct_2015/, revised October 2015.

Source: TAHA, 2022.

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FIGURE 2

NOISE MONITORING LOCATIONS AND SENSITIVE RECEPTORS

TABLE 4: EXISTING AMBIENT NOISE LEVELS		
Noise Measurement Site (Figure 2)	**Noise Monitoring Location**	**Noise Level (dBA, L_{eq})**
1	Residences (2627 Cedar Ave.)	62.8
2	Pacifica Motel (228 Willow St.)	72.1
3	Holy Innocents School along Pacific Ave.	69.8
4	Alleyway between the Holy Innocents School and Pine Ave.	57.1
5	Residences (2533 Pine Ave.)	57.3
6	Residences (2442 Pine Ave.)	61.1
SOURCE: TAHA, 2022.		

The noise measurement results in **Table 4** show that the existing ambient noise levels near the project site are higher than the City's daytime exterior noise standards set forth for Noise District One listed in **Table 1**. In accordance with LBMC Section 8.80.150 (C), if the measured ambient level exceeds the exterior noise standards for its land use district, the allowable noise exposure standard shall be increased in five decibel increments to encompass the ambient noise level. **Table 5** lists the adjusted exterior noise standards for the proposed project.

TABLE 5: CITY OF LONG BEACH ADJUSTED EXTERIOR NOISE STANDARDS			
Sensitive Receptors with Similar Ambient Noise Levels	**Original Threshold for Noise District One (dBA, Leq)**	**Monitored Noise Levels (dBA, Leq)**	**Adjusted Standard for Noise District One (dBA, L_{50})**
Residences (2627 Cedar Ave.)	50.0	62.8	65.0
Pacifica Motel (228 Willow St.)	50.0	72.1	75.0
Holy Innocents School along Pacific Ave.	50.0	69.8	70.0
Alleyway between the Holy Innocents School and Pine Ave.	50.0	57.1	60.0
Residences (2533 Pine Ave.)	50.0	57.3	60.0
Residences (2442 Pine Ave.)	50.0	61.1	65.0
SOURCE: TAHA, 2022.			

Impact Assessment

a) Would the proposed project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less-than-Significant Impact with Mitigation Incorporated)

Construction

Construction for the Proposed Project will occur over three phases. The first phase will begin Summer of 2023 and continue until Fall 2024, the second phase will start in Fall 2024 and be completed by Spring 2025, the third and last phase began in Winter 2025 and will be completed in Spring 2027. In each phase of construction, demolition of existing buildings and re-construction of new buildings will occur. The impact analysis is predicted on the location of noise-sensitive land used and the existing setting. The sensitive receptors analyzed as part of this impact analysis would remain the same for each phase and the analysis has been completed for the project as a whole.

Construction activity would result in temporary increases in ambient noise levels in the area surrounding the project site on an intermittent basis. Noise levels from the construction of the proposed project would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction activities typically require the use of numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that would be used during construction are listed in **Table 6**. Due to the small size of the project site, it is anticipated that only one or two pieces of equipment would be operated at a time. The combined noise levels shown in **Table 6** consider the likelihood that up to two of the loudest pieces of construction equipment in that phase would be operating simultaneously. Noise levels would typically range from 73.7 to 82.0 dBA L_{eq} for each phase. When considered as an entire process with multiple pieces of equipment, demolition would generate the loudest noise level at approximately 82.0 dBA L_{eq} at 50 feet.

TABLE 6: PHASED CONSTRUCTION NOISE LEVELS

Construction Equipment	Noise Level at 50 feet (dBA)
DEMOLITION	
Concrete Saw	82.6
Backhoe	73.6
Dozer	77.7
Demolition Combined	**82.0**
SITE PREPARATION	
Grader	81.0
Backhoe	73.6
Dozer	77.7
Site Preparation Combined	**81.7**
GRADING	
Grader	81.0
Backhoe	73.6
Dozer	77.7
Grading Combined	**81.0**
Building Construction	
Concrete Mixer	74.8
Crane	72.6
Generator	77.6
Gradall	79.4
Backhoe	73.6
Welder	70.0
Building Construction Combined	**81.6**
Paving	
Paver	74.2
Roller	73.0
Paving Combined	**77.5**
Architectural Coating	
Air Compressor	73.7
Architectural Coating Combined	**73.7**

SOURCE: FHWA, *Roadway Construction Noise Model*, 2008

Construction activities would occur Monday through Friday, and workers would typically be onsite from 7:00 am to 5:00 pm. Construction on Saturdays from 8:00 am to 4:00 pm would occur as needed through key milestones throughout the project. The LBMC has not established a quantitative standard for construction noise specifically, which is instead regulated by allowable hours of construction set forth in LBMC Section 8.80.202. Construction activity would therefore comply with the allowable hours of construction in the LBMC, which are 7:00 am to 7:00 pm Monday through Friday, 9:00 am to 6:00 pm on Saturday, and no construction activity on Sundays.

For informational purposes construction noise has been assessed at offsite uses and are shown in **Table 7**. The nearest offsite uses and sensitive receptors are residences along Pine Avenue located approximately 20 feet east from the project site across an existing alleyway. Due to the small size of the project site, it is anticipated that only one or two pieces of equipment would be operated at a time. Demolition activity would likely be the loudest phase of construction, which would utilize a concrete saw, backhoe, and a dozer. The concrete saw is anticipated to be intermittently used during demolition and demolition activity would be more accurately characterized by simultaneous operation of the backhoe and dozer. A backhoe and dozer would generate a noise level of approximately 82.0 dBA L_{eq} at 50 feet and is used as the reference construction noise level for this analysis.

TABLE 7: CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptors	Distance (feet)	Intervening Building /a/	Max Construction Noise Level (dBA, L_{eq})	City of Long Beach Exterior Noise Standard
Residences along Pine Ave. to the east	20	0.0	90.0	60.0
Iglesia Universal Church to the south	50	0.0	82.0	70.0
Residences along W. 25th St. to the southeast	60	0.0	80.4	60.0
Child Lane Preschool to the west	100	0.0	76.0	70.0
Razalan Lee Medical Group to the west	100	0.0	76.0	70.0
The James S. Benedict Child Development Center to the west	100	0.0	76.0	70.0
Pacific Burnett Clinic to the southwest	120	0.0	74.4	70.0
Residences to the southwest and to the southeast	190	0.0	70.4	70.0
Residences to the east approximately 200 feet	180	4.5	66.4	60.0
Residences along Cedar Ave. to the west	230	4.5	64.2	60.0
Pacifica Motel to the west	235	4.5	64.1	75.0
Panacea Health Care Clinic to the north	255	4.5	63.3	70.0
The Cove Hotel, Ascend Hotel Collection to the east	340	4.5	60.8	75.0
Young Horizons Ludloff Center Preschool to the north	380	7.5	56.9	70.0
Residences along E. Vernon St. to the east	470	7.5	55.0	60.0
Young Horizons North Pacific Center Preschool to the south	515	7.5	54.2	70.0
Pacific Medical Center to the north	495	10.5	51.6	70.0

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row.
SOURCE: TAHA, 2022.

Construction of the proposed project would not result in a violation of the construction noise regulations set forth by LBMC Section 8.80.2020 which establishes allowable hours of construction in the City. Nonetheless, to reduce construction noise levels at nearby sensitive receptors the proposed project would implement Mitigation Measures **N1** through **N6**, which are standard best management practices to control noise at offsite uses. These include installing temporary barriers around eastern property line project site to help control noise at adjacent sensitive receptors (Mitigation Measure **N1**), requiring the construction contractor to use engine mufflers consistent with manufacturers' standards (Mitigation Measure **N2)**, requiring all equipment to be properly maintained to assure that no additional noise due to worn or improperly maintained parts would be generated at the project site (Mitigation Measure **N2**). Although Mitigation Measures **N3** through **N6** are not quantifiable, they would still provide noise control by locating equipment staging areas away from sensitive receptors, limiting equipment idling noise, and establishing a noise disturbance coordinator.

Table 8 shows noise levels at sensitive receptors after the utilization of mufflers and the installation of temporary noise barriers. Although construction noise levels would be higher than the City of Long Beach Exterior Noise Standards at nearby residences along Pine Avenue and West 25th Street, these standards are only provided as a point of reference for construction noise levels. Construction activity would comply with the allowable hours of construction set forth in LBMC Section 8.80.202 which is how the City regulates construction noise. Additionally, construction noise would be temporary and intermittent and noise levels could be lower than expected. Therefore, the proposed project would result in a less-than-significant impact with mitigation incorporated related to on-site construction noise.

Mitigation Measures

N1 The construction contractor shall ensure that barriers, such as, but not limited to, plywood structures or flexible sound control curtains extending a minimum of eight feet in height shall be erected along boundary of the Project site adjacent to residences along Pine Avenue to minimize the amount of noise during construction on the nearby noise-sensitive uses located offsite. Noise barriers shall be capable of reducing construction noise levels by 10 dB.

N2 The construction contractor shall ensure that power construction equipment (including combustion or electric engines), fixed or mobile, shall be equipped with noise shielding and muffling devices (consistent with manufacturers' standards) during the entirety of construction of the proposed project. The combination of muffling devices and noise shielding shall be capable of reducing noise by at least 5 dBA from non-muffled and shielded noise levels. Prior to initiation of construction the contractor shall demonstrate to the city that equipment is properly muffled, shielded and maintained. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.

N3 Rubber-tired equipment shall be used rather than tracked equipment when feasible.

N4 Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.

N5 A public liaison shall be appointed for project construction and be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern.

N6 The public shall be notified in advance of the location and dates of construction hours and activities.

TABLE 8: MITIGATED CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptors	Distance (feet)	Mitigation Measure /a/	Mitigated Noise Level	Max Construction Noise Level (dBA, L_{eq})	City of Long Beach Exterior Noise Standard
Residences along Pine Ave. to the east	20	N1, N2	67.0	75.0	60.0
Iglesia Universal Church to the south	50	N2	77.0	77.0	70.0
Residences along W. 25th St. to the southeast	60	N2	77.0	75.4	60.0
Child Lane Preschool to the west	100	N2	77.0	71.0	70.0
Razalan Lee Medical Group to the west	100	N2	77.0	71.0	70.0
The James S. Benedict Child Development Center to the west	100	N2	77.0	71.0	70.0
Pacific Burnett Clinic to the southwest	120	N2	77.0	69.4	70.0
Residences to the southwest and to the southeast	190	N2	77.0	65.4	70.0
Residences to the east approximately 200 feet	180	N2	77.0	61.4	60.0
Residences along Cedar Ave. to the west	230	N2	77.0	59.2	60.0
Pacifica Motel to the west	235	N2	77.0	59.1	75.0
Panacea Health Care Clinic to the north	255	N2	77.0	58.3	70.0
The Cove Hotel, Ascend Hotel Collection to the east	340	N2	77.0	55.8	75.0
Young Horizons Ludloff Center Preschool to the north	380	N2	77.0	51.9	70.0
Residences along E. Vernon St. to the east	470	N2	77.0	50.0	60.0
Young Horizons North Pacific Center Preschool to the south	515	N2	77.0	49.2	70.0
Pacific Medical Center to the north	495	N2	77.0	46.6	70.0

/a/ Includes a 10 dB reduction for a temporary noise barrier (Mitigation Measure N1) and a 5 dB reduction for equipment mufflers (Mitigation Measure N2)
SOURCE: TAHA, 2022

Operations

On-Site Stationary Noise Sources. Operational stationary noise was assessed for operation of the proposed project and would include noise typically associated with school and church operations. Operational stationary sources of noise would include mechanical equipment such as heating, ventilation, and air conditioning (HVAC) noise. Existing noise sources would remain, such as noise from students playing on the field, parking activity noise, and school and church bells. Therefore, these sources of noise would not result in an incremental increase in noise. General conversational noise would mostly occur within the structures of the school, gymnasium and church and would not be audible at off-site uses.

HVAC equipment noise would not exceed exterior noise standards at any nearby sensitive receptors. HVAC equipment would be located on the ground, next to the proposed structures. The distance between the HVAC system and the closest sensitive receptors is approximately 30 feet. **Table 9** indicates the HVAC equipment noise levels at the five nearest sensitive receptors adjacent to the proposed project. HVAC equipment would generate a noise level of 50.0 dBA L_{eq} at 50 feet. At the nearest sensitive receptor located approximately 30 feet away, HVAC noise levels would approximately be 54.4 dBA L_{eq} and would not exceed the 55.0 dBA threshold for HVAC equipment noise measured at the property line, set forth in LBMC Section 8.20.200. Therefore, the proposed project would result in a less-than-significant impact related to HVAC equipment noise.

TABLE 9: OPERATIONAL NOISE - HVAC EQUIPMENT NOISE LEVEL

Sensitive Receptors	Distance (feet) /a/	Reference Noise Level (dBA)	HVAC Equipment Noise Level (dBA, Leq)	Threshold	Exceed Threshold?
Residences along Pine Ave. to the east	30	50.0	54.4	55.0	No
Iglesia Universal Church to the east	60	50.0	48.4	55.0	No
Residences along W. 25th St. to the southeast	80	50.0	45.9	55.0	No
Child Lane Preschool to the west	105	50.0	43.6	55.0	No
Razalan Lee Medical Group to the west	105	50.0	43.6	55.0	No
James S. Benedict Child Development Center to the west	105	50.0	43.6	55.0	No

/a/ Distance is measured from approximate location of HVAC equipment to the sensitive receptor.
SOURCE: TAHA, 2022; Daikin Air Intelligence, Base Efficient Air Conditioner Packaged Rooftop Unit DBC Commercial 7.5 – 12.5 Nominal Tons, available at https://budgetheating.com/v/vspfiles/downloadables/DBC%20Series%207.5-12.5%20Tons%20Technical%20Specifications.pdf.

The proposed project includes a total of 114 parking spaces. Sources of noise would include engines accelerating, doors slamming, car alarms, and people talking. It is anticipated that vehicle speeds on the project site would not exceed 10 miles per hour. **Table 10** includes an analysis of parking noise at sensitive receptors most likely to be affected.

Parking activity noise was calculated based upon a reference noise level of 56.4 dBA L_{eq} at 50 feet for a 1,000-parking space parking garage.[8] The noise level was adjusted using guidance provided by the Federal Transit Administration Transit Noise and Vibration Impact Assessment guidance and a maximum volume of 45 trips per hour, as estimated based on the number of new dedicated parking spaces for the project. The resultant noise level of parking activity at a distance of 90 feet at the nearest sensitive receptor would approximately be 51.3 dBA L_{eq}, which would be lower than the existing noise level of 51.6 dBA L_{eq} and the daytime exterior noise standard of 60 dBA. According to FHWA guidance, single-glazed windows provide approximately 25 dB of exterior to interior noise reduction.[9] Interior noise levels at the nearest sensitive receptor would be approximately 26.3 dBA, L_{eq} and would not exceed the 45 dBA daytime interior noise standard. Furthermore, project noise levels would be similar to the noise levels generated by the existing parking lot. Therefore

Operational noise related to HVAC and parking activity would not exceed LBMC exterior noise standards. Therefore, the proposed project would result in a less-than-significant impact related to operational noise.

Mobile Noise Source. The Project would generate approximately 328 net new daily vehicle trips, including 72 AM peak hour trips and 57 PM peak hour trips.[10] Operational mobile noise was assessed using the FHWA Traffic Noise Model Version 3.1 (TNM 3.1). Mobile noise levels were modeled for each of the three scenarios: for Existing (2022) conditions, Future No Project (2027) conditions and Future Plus Project (2027) conditions. Existing noise levels measured at nearby sensitive receptors are in the range of approximately 59.5 dBA L_{eq} to 70.8 dBA, $L_{eq.}$

[8]FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

[9]FHWA, *Highway Traffic Noise Analysis and Abatement Guidance*, *Table 6: Building Noise Reduction Factors*, December 2011.

[10] Iteris*, 2500 Pacific* (*Holy Innocents) Project Traffic and Parking Study*, 2022.

TABLE 10: OPERATIONAL NOISE - PARKING ACTIVITY NOISE LEVEL

Sensitive Receptors	Distance (feet) /a/	Reference Noise Level (dBA)	Parking Activity Noise Level (dBA, L_{eq})	Interior Parking Activity Noise Level (dBA, L_{eq}) /b/	Exterior Threshold (dBA)	Interior Threshold (dBA)	Exceed Threshold?
Residences along Pine Ave. to the east	90	56.4	51.3	26.3	60.0	45.0	No
Iglesia Universal Church to the east	220	56.4	43.5	18.5	70.0	45.0	No
Residences along W. 25th St. to the southeast	220	56.4	43.5	18.5	60.0	45.0	No
Child Lane Preschool to the west	180	56.4	45.3	20.3	70.0	45.0	No
Razalan Lee Medical Group to the west	170	56.4	45.8	20.8	70.0	45.0	No
James S. Benedict Child Development Center to the west	200	56.4	44.4	19.4	70.0	45.0	No

/a/ Distance of the center of parking lot to property line of sensitive receptor.
/b/ A 20 dB exterior to interior noise reduction has been applied.
SOURCE: TAHA, 2022, FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

Table 11 illustrates modeled mobile noise levels for the above traffic scenarios. Predicted noise levels calculated using traffic volumes for the Existing (2022) scenario are similar to the measured existing noise levels.

TABLE 11: ESTIMATED COMMUNITY NOISE EQUIVALENT LEVEL – BASELINE PLUS PROJECT

Roadway Segment	Estimated dBA, CNEL		
	Existing (2022)	Future No Project (2027)	Future Plus Project (2027)
Pine Ave. from W.25th to Willow St.	60.9	61.1	61.2
W. 25th between Pine Ave. and Pacific Ave.	59.5	59.7	59.8
Pacific Ave. between Willow St. and W. 25th St.	68.8	68.9	69.0
Willow St. between Pine Ave. and Pacific Ave.	70.8	71.0	71.1

SOURCE: TAHA, 2022

Table 12 provides a comparison of the incremental change in noise levels between various traffic scenarios. The maximum mobile source noise level increase between the Existing (2022) condition and the Future Plus Project (2027) conditions would be 0.3 dBA, L_{eq}. The maximum mobile source noise level increase between the Future (2027) No Project scenario and the Future Plus Project (2027) scenario would be 0.13 dBA, L_{eq}. This demonstrates that the majority of mobile source noise level increase would be a result of future growth of traffic volumes not related to the proposed project. CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 dBA or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard. Where noise levels would remain at or below the normally acceptable noise level standard with the project, noise level increases of 5 dBA or greater would be considered significant. Therefore, the proposed project would result in a less-than-significant impact to sensitive receptors as related to mobile source noise.

TABLE 12: MOBILE NOISE LEVELS COMPARISON

Roadway Segment	Noise Levels (dBA, L_{eq})	
	Incremental Increase from Existing (2022) to Future (2027) Plus Project	Incremental Increase from Future No Project to Future (2027) Plus Project
Pine Ave. from W.25th to Willow St.	0.3	0.0
W. 25th between Pine Ave. and Pacific Ave.	0.3	0.1
Pacific Ave. between Willow St. and W. 25th St.	0.2	0.1
Willow St. between Pine Ave. and Pacific Ave.	0.2	0.0

SOURCE: TAHA, 2022.

b) Would the proposed project result in generation of excessive ground-borne vibration or ground-borne noise levels? (Less-than-Significant Impact)

Construction

Construction activity can generate varying degrees of vibration, depending on the procedure and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site

often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to slight damage at the highest levels. In most cases, the primary concern regarding construction vibration relates to damage.

Typical equipment anticipated to be used during construction and their associated vibration levels are shown in **Table 13**. Equipment that would be utilized would be most similar to a small bulldozer, which generates a PPV of 0.003 inches per second at 25 feet. The equipment with the largest potential for vibration impacts would be an excavator, which generates a PPV of 0.040 inches per second at 25 feet. The nearest sensitive receptors would be located approximately 20 feet away from construction activity when equipment would be located on the property line of the proposed project site, as shown in **Table 14**. Vibration levels decreases rapidly with distance. Vibration levels at the nearest sensitive receptors would occur at a maximum of 0.056 PPV inches per second, which would be below the 0.2 inches per second vibration damage criterion (PPV) set by the FTA. Therefore, the proposed project would result in a less-than-significant impact related to on-site construction vibration.

TABLE 13: VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Vibration Level at 25 feet (Inches/Second)
Small Bulldozer	0.003
Excavator	0.040
Large Bulldozer	0.089

SOURCE: FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

TABLE 14: VIBRATION ASSESSMENT PER PIECE OF CONSTRUCTION EQUIPMENT

Sensitive Receptor	Distance (feet)	PPV at Structure (inches/second)
VIBRATION ASSESSMENT (SMALL BULLDOZER)		
Residences along Pine Ave. to the east	20	0.004
Iglesia Universal Church to the south	50	0.001
VIBRATION ASSESSMENT (EXCAVATOR)		
Residences along Pine Ave. to the east	20	0.056
Iglesia Universal Church to the south	50	0.014

SOURCE: TAHA, 2022

Operations

The proposed project would not include significant sources of vibration. Mechanical equipment and vehicle trips would not generate perceptible vibration beyond the project site. Therefore, the proposed project would result in a less-than-significant impact related to operational vibration. No mitigation measures would be necessary.

Mitigation Measures

No mitigation measures are required.

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 proposed project expose people residing or working in the project area to excessive noise levels? (No Impact)

The proposed project is located outside of the 60 dB CNEL contours of the Long Beach Airport and would not expose people residing or working in the project area to excessive noise levels.[11] Therefore, no impact related to airport or airstrip noise would occur.

Mitigation Measures

No mitigation measures are required.

References

California Department of Transportation, *Technical Noise Supplement*, September 2013.

California State University Long Beach, *Campus Master Plan Final Environmental Impact Report, Environmental Noise Study for the Proposed California State University Master Plan Revision*, May 2008.

City of Long Beach Municipal Code, *Chapter 8.80 Noise*.

City of Long Beach Municipal Code, *Section 8.80.150 Exterior Noise Limits—Sound Levels by Receiving Land Use District.*

City of Long Beach Municipal Code, *Section 8.80.160 Exterior Noise Limits – Correction for Character of Sound*.

City of Long Beach Municipal Code, *Section 8.80.200 Noise Disturbances—Acts Specified.*

City of Long Beach Municipal Code, *Section 8.80.202 Construction Activity—Noise Regulations.*

City of Long Beach Municipal Code, *Section 8.80.340 Variance—Exemption from regulations.*

Federal Highway Administration (FHWA), *Roadway Construction Noise Model*, Version 1.1, 2008.

Federal Highway Administration (FHWA), *Traffic Noise Model Version 3.1* (TNM 3.1), March 2022

Federal Highway Administration, *Highway Traffic Noise Analysis and Abatement Guidance*, *Table 6: Building Noise Reduction Factors*, December 2011.

Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, September 2018.

Iteris, *2500 Pacific (Holy Innocents) Project Traffic and Parking Study*, 2022

Long Beach Airport, *Year 2004 CNEL Contours*, http://www.longbeach.gov/globalassets/lgb/community-information/noise-abatement/eir-noise-contour, 2005.

Noise Levels of Lift Trucks, rigolett.home.xs4all.nl/ENGELS/equipment/liftfr.htm, May 25, 2001.

[11]Long Beach Airport, *Year 2004 CNEL Contours*, http://www.longbeach.gov/globalassets/lgb/community-information/noise-abatement/eir-noise-contour, 2005.

Appendix

Noise and Vibration Calculations

Noise Formulas

Noise Distance Attenuation

Hard Site

Ni = No - 20 * LOG(Di/Do)

Di = distance to receptor (Di>Do)

Ni = attenuated noise level of interest
No = reference noise level

Do = reference distance

Source: (Bolt, Beranek, and Newman, 1971)

Summation of Noise Levels

Equation: Ns=10 x LOG10((10^(N1/10))+(10^(N2/10))+(10^(N3/10))+(10^(N4/10)))

Ns = Noise Level Sum
N1 = Noise Level 1
N2 = Noise Level 2
N3 = Noise Level 3
N4 = Noise Level 4

Source: California Department of Transportation, Technical Noise Supplement, 2013

PHASED CONSTRUCTION NOISE LEVELS	
Construction Equipment	**Noise Level at 50 feet (dBA)**
Demolition	
Concrete Saw	82.6
Backhoe	80.0
Dozer	77.7
Combined Demolition Noise	**82.0**
Site Preparation	
Grader	81.0
Backhoe	73.6
Dozer	77.7
Combined Site Preparation Noise	**81.7**
Grading	
Grader	81.0
Dozer	77.7
Backhoe	73.6
Combined Grading Noise	**81.0**
Building Construction	
Generator	77.6
Gradall	79.4
Backhoe	73.6
Crane	72.6
Welder	70.0
Concrete Mixer	74.8
Combined Building Construction Noise	**81.6**
Paving	
Paver	74.2
Roller	73.0
Combined Paving Noise	**74.2**
Architectural Coating	
Air Compressor	73.7
Combined Architectural Coating Noise	**73.7**

Source: Federal Highway Administration, Roadway Construction Noise Model, 2008
Source: *Noise Levels of Lift Trucks*, 25 May 2001, rigolett.home.xs4all.nl/ENGELS/equipment/liftfr.htm.

EXISTING AMBIENT NOISE LEVELS	
[Noise Measurement Site] Noise Monitoring Locations	**Sound Level (dBA, Leq)**
[ST-1] Residences (2627 Cedar Avenue)	62.8
[ST-2] Pacifica Motel (228 Willow Street)	72.1
[ST-3] Holy Innocents School along Pacific Avenue	69.8
[ST-4] Alleyway between the Holy Innocents School and Pine Avenue	57.1
[ST-5] Residences (2533 Pine Avenue)	57.3
[ST-6] Residences (2442 Pine Ave)	61.1

SENSITIVE RECEPTOR	
Sensitive Receptor	**Distance From Project Site (Feet)**
Residences along Pine Avenue to the East	20
Iglesia Universal	50
Residences along West 25th Street to the Southeast	60
Child Lane Preschool to the West	100
Razalan Lee Medical Group to the West	100
The James S Benedict Child Development Center Preschool to the We	100
Pacific Burnett Clinic to the Southwest	120
Residences along Pacific Avenue to the Southwest	190
Residences along East 25th Street to the Southeast	210
Residences along Earl Avenue to the East	180
Residences along Cedar Avenue to the West	230
Pacifica Motel to the West	235
Panacea Health Care Clinic to the North	255
The Cove Hotel, Ascend Hotel Collection to the East	340
Young Horizons Preschool Ludloff Center Preschool to the North	380
Residences along East Vernon Street to the East	470
Young Horizons North Pacific Center Preschool to the South	515
Pacific Medical Center to the North	495

CITY OF LONG BEACH ADJUSTED EXTERIOR NOISE STANDARDS			
Sensitive Receptors Near…	**Original Threshold for Noise District One (dBA, Leq)**	**Monitored Noise Levels (dBA, Leq)**	**Adjusted Standard for Noise District One (dBA, L_{50})**
[ST-1] Residences (2627 Cedar Avenue)	50	62.8	65
[ST-2] Pacifica Motel (228 Willow Street)	50	72.1	75
[ST-3] Holy Innocents School along Pacific Avenue	50	69.8	70
[ST-4] Alleyway between the Holy Innocents School and Pine Avenue	50	57.1	60
[ST-5] Residences (2533 Pine Avenue)	50	57.3	60
[ST-6] Residences (2442 Pine Ave)	50	61.1	65

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS						
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise Level (dBA, Leq)**	**Noise Monitor**	**City of Long Beach Adjusted Exterior Noise Standard**
Residences along Pine Avenue to the East	20	0	82.0	90.0	ST-4, ST-5	60
Iglesia Universal	50	0	82.0	82.0	ST-3	70
Residences along West 25th Street to the Southeast	60	0	82.0	80.4	ST-4	60

Child Lane Preschool to the West	100	0	82.0	76.0	ST-5	70
Razalan Lee Medical Group to the West	100	0	82.0	76.0	ST-3	70
The James S Benedict Child Development Center Preschool to the We	100	0	82.0	76.0	ST-3	70
Pacific Burnett Clinic to the Southwest	120	0	82.0	74.4	ST-3	70
Residences to the Southwest and Southeast	190	0	82.0	70.4	ST-3	70
Residences to the East Approximately 200 ft. Away	180	4.5	82.0	66.4	ST-3	60
Residences along Cedar Avenue to the West	230	4.5	82.0	64.2	ST-3	60
Pacifica Motel to the West	235	4.5	82.0	64.1	ST-5	75
Panacea Health Care Clinic to the North	255	4.5	82.0	63.3	ST-1	70
The Cove Hotel, Ascend Hotel Collection to the East	340	4.5	82.0	60.8	ST-5	75
Young Horizons Preschool Ludloff Center Preschool to the North	380	7.5	82.0	56.9	ST-5	70
Residences along East Vernon Street to the East	470	7.5	82.0	55.0	ST-5	60
Young Horizons North Pacific Center Preschool to the South	515	7.5	82.0	54.2	ST-2	70
Pacific Medical Center to the North	495	10.5	82.0	51.6	ST-3	70

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

MITIGATED CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptors	Distance (feet)	Intervening Building /a/	Reference Noise Level (dBA)	Mitigation Measure /b/	Mitigation /b/	Mitigated Noise Level	Max Constructio n Noise Level (dBA,	City of Long Beach Adjusted Exterior
Residences along Pine Avenue to the East	20	0	82.0	N1, N2	15.0	67.0	75.0	60
Iglesia Universal	50	0	82.0	N1	5.0	77.0	77.0	70
Residences along West 25th Street to the Southeast	60	0	82.0	N1	5.0	77.0	75.4	60
Child Lane Preschool to the West	100	0	82.0	N1	5.0	77.0	71.0	70
Razalan	100	0	82.0	N1	5.0	77.0	71.0	70
The James S Benedict Child Development Center Preschool to the We	100	0	82.0	N1	5.0	77.0	71.0	70
Pacific Burnett Clinic to the Southwest	120	0	82.0	N1	5.0	77.0	69.4	70
Residences to the Southwest and Southeast	190	0	82.0	N1	5.0	77.0	65.4	70
Residences to the East Approximately 200 ft. Away	180	4.5	82.0	N1	5.0	77.0	61.4	60
Residences along Cedar Avenue to the West	230	4.5	82.0	N1	5.0	77.0	59.2	60
Pacifica Motel to the West	235	4.5	82.0	N1	5.0	77.0	59.1	75
Panacea Health Care Clinic to the North	255	4.5	82.0	N1	5.0	77.0	58.3	70
The Cove Hotel, Ascend Hotel Collection to the East	340	4.5	82.0	N1	5.0	77.0	55.8	75
Young Horizons Preschool Ludloff Center Preschool to the North	380	7.5	82.0	N1	5.0	77.0	51.9	70
Residences along East Vernon Street to the East	470	7.5	82.0	N1	5.0	77.0	50.0	60
Young Horizons North Pacific Center Preschool to the South	515	7.5	82.0	N1	5.0	77.0	49.2	70
Pacific Medical Center to the North	495	10.5	82.0	N1	5.0	77.0	46.6	70

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

/b/ Mitigation Measure N1 includes a 10 dB reduction for a temporary noise barrier. Mitigation Measures N2Includes a 5 dB reduction for equipment mufflers.

OPERATIONAL NOISE - HVAC EQUIPMENT NOISE LEVEL

Sensitive Receptors	Distance (feet)	Intervening Building /a/	Reference Noise Level (dBA)	HVAC Equipment Noise Level (dBA, Leq)	Threshold	Exceed Threshold? Yes or No
Residences along Pine Avenue to the East	30	0	50	54.4	55.0	No
Iglesia Universal	60	0	50	48.4	55.0	No
Residences along West 25th Street to the Southeast	80	0	50	45.9	55.0	No
Child Lane Preschool to the West	105	0	50	43.6	55.0	No
Razalan Lee Medical Group to the West	105	0	50	43.6	55.0	No
James S. Benedict Child Development Center	105	0	50	43.56	55.00	No

PARKING ACTIVITY NOISE ANALYSIS

Parking Lot Noise = Reference Noise Level + 10 x LOG (Number of Average Peak Hour Trips/1000)

Reference Noise Level at 50 feet (dBA, Leq)	Reference Parking Lot Capacity (parking spaces)
56.4	1,000

Proposed Project Parking Noise Level at 50 feet (dBA, Leq)	Maximum Trips
44.0	57

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment* , September 2018

OPERATIONAL NOISE - PARKING ACTIVITY NOISE LEVEL

Sensitive Receptors	Distance (feet) /a/	Intervening Building	Reference Noise Level (dBA)	Parking Activity Noise Level (dBA, Leq)	Interior Parking Activity Noise (dBA, Leq) /b/	Exterior Threshold	Interior Threshold	Exceed Threshold? Yes or No
Residences along Pine Avenue to the East	90	0	56.4	51.3	26.3	60	45	No
Iglesia Universal	220	0	56.4	43.5	18.5	70	45	No
Residences along West 25th Street to the Southeast	220	0	56.4	43.5	18.5	60	45	No
Child Lane Preschool to the West	180	0	56.4	45.3	20.3	70	45	No
Razalan Lee Medical Group to the West	170	0	56.4	45.8	20.8	70	45	No
James S. Benedict Child Development Center	200	0	56.4	44.4	19.4	70	45	No

/a/ Distance of the center of parking lot to property line of sensitive receptor.
/b/ Building insulation provides a typical reduction in noise from interior to exterior of 25 dB.

Vibration Formulas

Vibration PPV Attenuation

Equation: PPVequip = PPVref x (25/D)^1.5
PPV (equip) is the peak particle velocity in in/sec of the equipment adjusted for distance
PPV (ref) is the reference vibration level in in/sec at 25 feet from Table 12-2
D is the distance from the equipment to the receiver.

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

Vibration VdB Attenuation

Equation: Lv(D) = Lv(25 ft) – 30log(D/25)
D = Distance (feet)
Lv(D) = Vibration Level

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment	Peak Particle Velocity (PPV) at 25 feet (Inches/Second)
Small Bulldozer	0.003
Excavator	0.040
Large Bulldozer	0.089

SOURCE: NHDOT, Ground Vibrations Emanating from Construction Equipment, September 2012.
SOURCE: FTA, Transit Noise and Vibration Impact Assessment, September 2018.

VIBRATION ASSESSMENT PER PIECE OF EQUIPMENT		
Vibration Assessment (Small Bulldozer)		
Sensitive Receptor	Distance (feet)	PPV at Structure
Residences along Pine Avenue to the East	20	0.0042
Iglesia Universal	50	0.0011
Vibration Assessment (Excavator)		
Sensitive Receptor	Distance (feet)	PPV at Structure
Residences along Pine Avenue to the East	30	0.0304
Iglesia Universal	50	0.0141

Traffic Noise Model Results

Existing (2022)

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.1.7970.37608	REPORT DATE:	28 March 2022
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	3/28/2022 3:25:34 PM
CASE:	Holy Innocents Church	ORGANIZATION:	
UNITS:	English	ANALYSIS BY:	Kieran
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state	
PAVEMENT TYPE(S) USED:	Average	highway agency substantiates the use of a different	
		type with approval FHWA.	

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Receiver-1	0	0	---	60.9	0.0	---	---	Sound Level
Receiver-2	0	0	---	59.5	0.0	---	---	Sound Level
Receiver-3	0	0	---	68.8	0.0	---	---	Sound Level
Receiver-4	0	0	---	70.8	0.0	---	---	Sound Level

Future No Project (2027)

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.1.7970.37608	REPORT DATE:	28 March 2022
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	3/28/2022 3:22:50 PM
CASE:	Holy Innocents Church	ORGANIZATION:	
UNITS:	English	ANALYSIS BY:	Kieran
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state	
PAVEMENT TYPE(S) USED:	Average	highway agency substantiates the use of a different	
		type with approval FHWA.	

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Receiver-1	0	0	---	61.1	0.0	---	---	Sound Level
Receiver-2	0	0	---	59.7	0.0	---	---	Sound Level
Receiver-3	0	0	---	68.9	0.0	---	---	Sound Level
Receiver-4	0	0	---	71.0	0.0	---	---	Sound Level

Future Plus Project (2027)

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.1.7970.37608	REPORT DATE:	28 March 2022
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	3/28/2022 3:23:18 PM
CASE:	Holy Innocents Church	ORGANIZATION:	
UNITS:	English	ANALYSIS BY:	Kieran
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state	
PAVEMENT TYPE(S) USED:	Average	highway agency substantiates the use of a different	
		type with approval FHWA.	

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Receiver-1	0	0	---	61.2	0.0	---	---	Sound Level
Receiver-2	0	0	---	59.8	0.0	---	---	Sound Level
Receiver-3	0	0	---	69.0	0.0	---	---	Sound Level
Receiver-4	0	0	---	71.1	0.0	---	---	Sound Level

Noise Monitoring Data

Site 1: 2627 Cedar Avenue

Session Report

3/30/2022

Information Panel

Name	Holy Innocents_ST-1
Start Time	11/30/2021 1:57:02 PM
Stop Time	11/30/2021 2:12:02 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	62.7 dB	Lmax	1	84.9 dB
Lmin	1	50.4 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

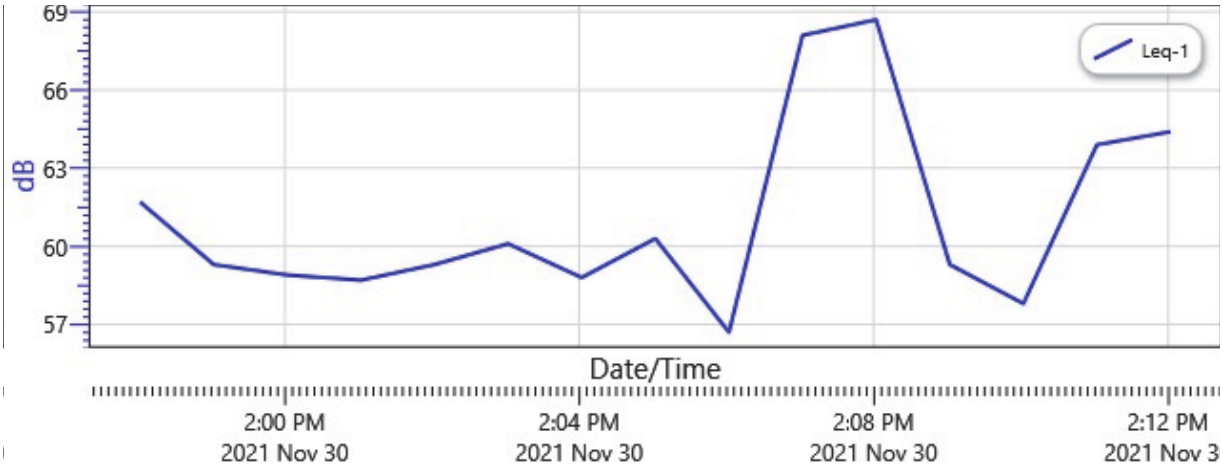
Logged Data Table

Date/Time	Leq-1
11/30/2021 1:58:02 PM	61.7
1:59:02 PM	59.3
2:00:02 PM	58.9
2:01:02 PM	58.7
2:02:02 PM	59.3
2:03:02 PM	60.1
2:04:02 PM	58.8
2:05:02 PM	60.3
2:06:02 PM	56.7
2:07:02 PM	68.1
2:08:02 PM	68.7
2:09:02 PM	59.3
2:10:02 PM	57.8

2:11:02 PM	63.9
2:12:02 PM	64.4

Logged Data Chart

Holy Innocents_ST-1: Logged Data Chart



Noise Measurement Report Form

Project: Holy Innocents Church Contract No (s): N/A

Date: 11/30/24 Day of Week: Tuesday Time: 1:57pm

Monitoring Site Number: ST-1 Monitoring Site Address: 2627 Cedar Ave.

Measurement Taken By: Billy

Approximate Wind Speed: 2 (mph) [km/hr] Approximate Wind Direction: From the S

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Project Site: 480ft.

Receptor Land Use (Check One) ☐ ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: Serial Number:

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15m.

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114 dba	n/a	n/a
L_{eq}	62.8 dba		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Traffic noise from Willow St.
2. Propeller plane noise.
3.
4. S280

Site 2: Pacifica Motel; 228 Willow Street

Session Report

3/30/2022

Information Panel

Name	Holy Innocents_ST-2
Start Time	11/30/2021 1:05:31 PM
Stop Time	11/30/2021 1:20:31 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	72.1 dB	Lmax	1	83 dB
Lmin	1	60.3 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

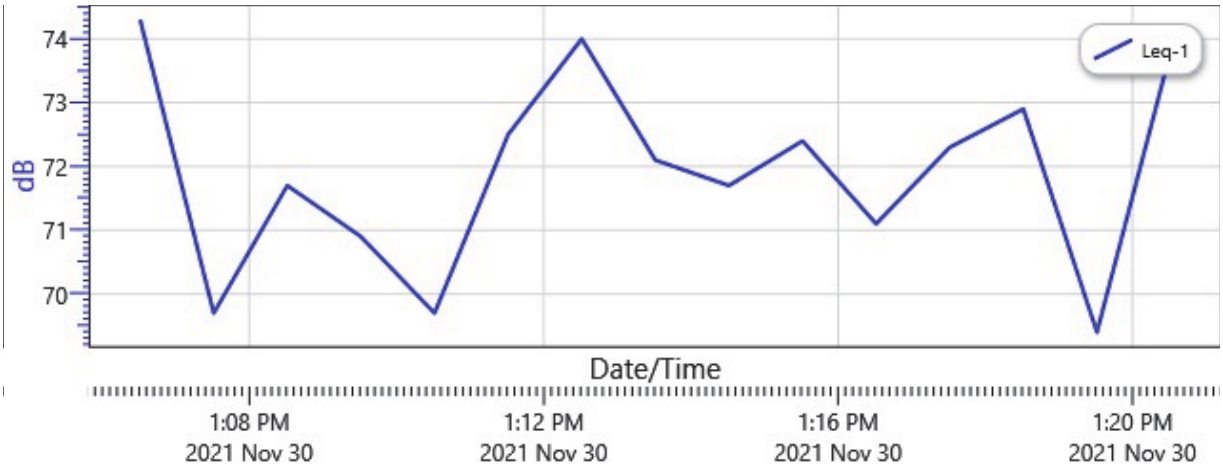
Logged Data Table

Date/Time	Leq-1
11/30/2021 1:06:31 PM	74.3
1:07:31 PM	69.7
1:08:31 PM	71.7
1:09:31 PM	70.9
1:10:31 PM	69.7
1:11:31 PM	72.5
1:12:31 PM	74
1:13:31 PM	72.1
1:14:31 PM	71.7
1:15:31 PM	72.4
1:16:31 PM	71.1
1:17:31 PM	72.3
1:18:31 PM	72.9

1:19:31 PM	69.4
1:20:31 PM	73.8

Logged Data Chart

Holy Innocents_ST-2: Logged Data Chart



Noise Measurement Report Form

Project: Holy Innocents Church Contract No (s): N/A

Date: 11/30/21 Day of Week: Tuesday Time: 1:05pm

Monitoring Site Number: ST-2 Monitoring Site Address: Pacifica Motel (228 Willow St.)

Measurement Taken By: Billy

Approximate Wind Speed: 2 mph [km/hr] Approximate Wind Direction: From the S

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Project Site: 225 ft.

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: Serial Number:

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15m.

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114 dba	n/a	n/a
L_{eq}	72.1 dba		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Heavy traffic noise.
2.
3.
4. S278

Site 3: Holy Innocents School along Pacific Avenue

Session Report

3/30/2022

Information Panel

Name	Holy Innocents_ST-3
Start Time	11/30/2021 12:44:17 PM
Stop Time	11/30/2021 12:59:17 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	69.7 dB	Lmax	1	82.4 dB
Lmin	1	58.4 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

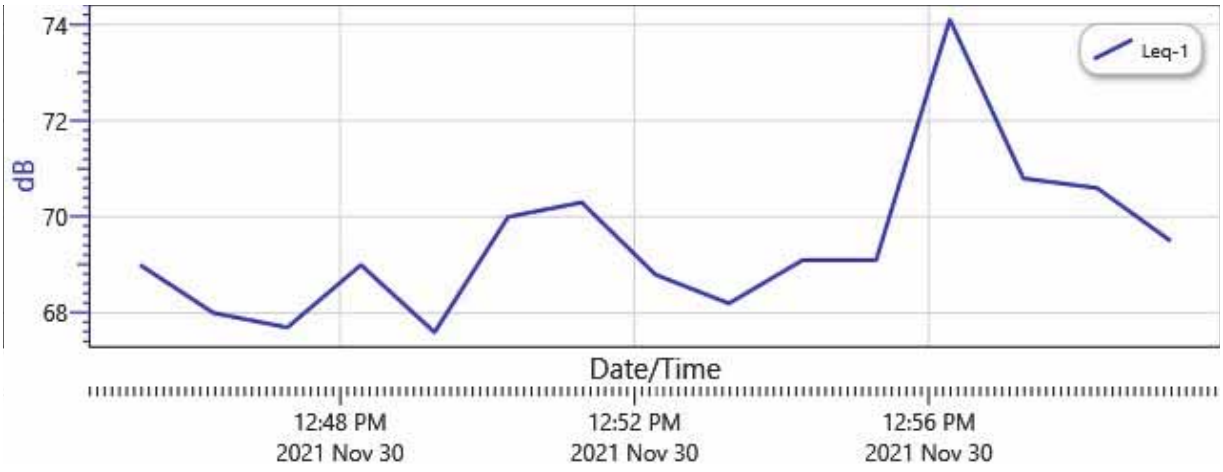
Logged Data Table

Date/Time	Leq-1
11/30/2021 12:45:17 PM	69
12:46:17 PM	68
12:47:17 PM	67.7
12:48:17 PM	69
12:49:17 PM	67.6
12:50:17 PM	70
12:51:17 PM	70.3
12:52:17 PM	68.8
12:53:17 PM	68.2
12:54:17 PM	69.1
12:55:17 PM	69.1
12:56:17 PM	74.1
12:57:17 PM	70.8

12:58:17 PM	70.6
12:59:17 PM	69.5

Logged Data Chart

Holy Innocents_ST-3: Logged Data Chart



Noise Measurement Report Form

Project: Holy Innocents Church Contract No (s): N/A

Date: 11/30/21 Day of Week: Tuesday Time: 12:45pm

Monitoring Site Number: ST-3 Monitoring Site Address: Holy Innocents School along Pacific Avenue

Measurement Taken By: Billy

Approximate Wind Speed: 4 mph [km/hr] Approximate Wind Direction: From the SW

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Project Site: 10 ft.

Receptor Land Use (Check One) ☑ Residential / Institutional (east of Pacific) ☐ Commercial / Recreational (west of Pacific)

Sound Level Meter: Make and Model: Serial Number:

Meter Setting ☐ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15m

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114 dbA	n/a	n/a
L_{eq}	69.8 dbA		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Capturing noise from traffic and students playing on the yard.
2. Commercial corridor to the west of Pacific Avenue.
3.
4. S277

Site 4: Alleyway between the Holy Innocents School and Pine Avenue

Session Report

3/30/2022

Information Panel

Name	Holy Innocents_ST-4
Start Time	11/30/2021 12:24:05 PM
Stop Time	11/30/2021 12:39:05 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	57.1 dB	Lmax	1	73.8 dB
Lmin	1	49.3 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

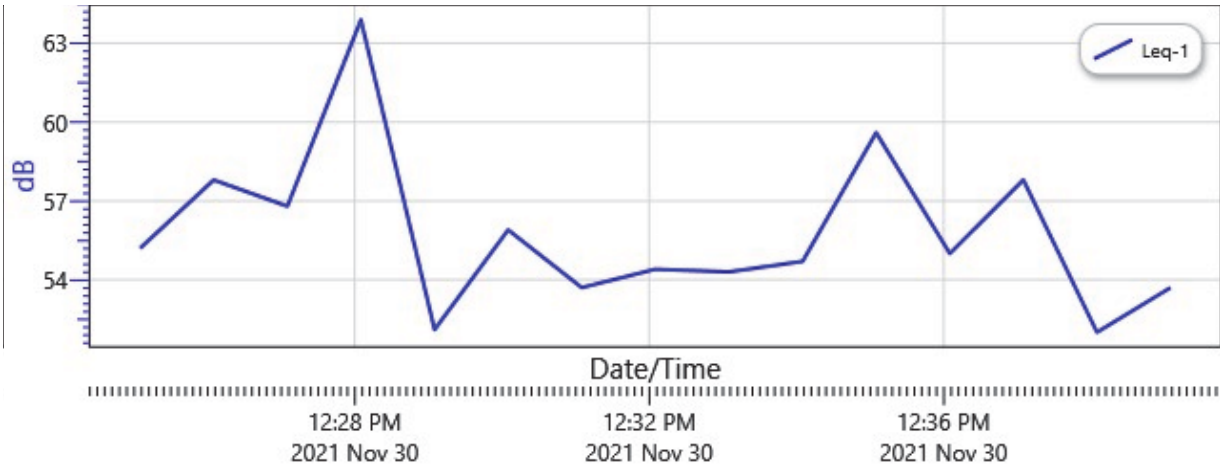
Logged Data Table

Date/Time	Leq-1
11/30/2021 12:25:05 PM	55.2
12:26:05 PM	57.8
12:27:05 PM	56.8
12:28:05 PM	63.9
12:29:05 PM	52.1
12:30:05 PM	55.9
12:31:05 PM	53.7
12:32:05 PM	54.4
12:33:05 PM	54.3
12:34:05 PM	54.7
12:35:05 PM	59.6
12:36:05 PM	55
12:37:05 PM	57.8

12:38:05 PM	52
12:39:05 PM	53.7

Logged Data Chart

Holy Innocents_ST-4: Logged Data Chart



Noise Measurement Report Form

Project: Holy Innocents Church Contract No (s): N/A

Date: 11/30/21 Day of Week: Tuesday Time: 12:25 pm

Monitoring Site Number: ST-4 Monitoring Site Address: Alleyway behind 2541 Pine

Measurement Taken By: B. Silly

Approximate Wind Speed: 1 mph [km/hr] Approximate Wind Direction: From the S

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Project Site: 10 ft.

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: Serial Number:

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 5m.

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114 dbA	n/a	n/a
L_{eq}	57.1 dbA		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. · flight route, low flying propeller planes
2. · Alleyway noise includes traffic from Cullton Street and students playing
3. on the field in the Holy Innocents School.
4. · Alleyway not really used by Cars.
· School Bell Noise.

S276

Site 5: 2533 Pine Avenue

Session Report

3/30/2022

Information Panel

Name	Holy Innocents_ST-5
Start Time	11/30/2021 12:03:24 PM
Stop Time	11/30/2021 12:18:24 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	57.2 dB	Lmax	1	73.4 dB
Lmin	1	49.6 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

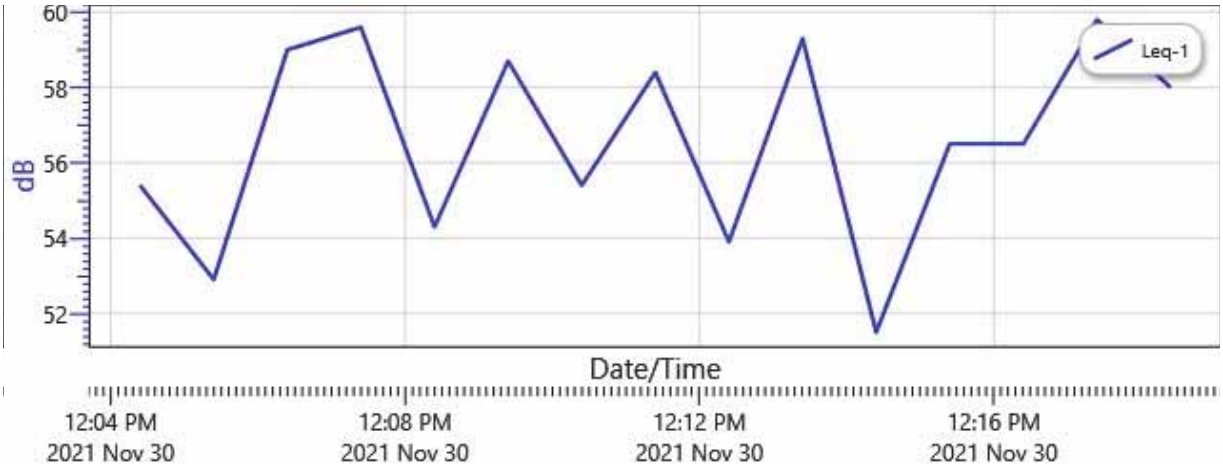
Logged Data Table

Date/Time	Leq-1
11/30/2021 12:04:24 PM	55.4
12:05:24 PM	52.9
12:06:24 PM	59
12:07:24 PM	59.6
12:08:24 PM	54.3
12:09:24 PM	58.7
12:10:24 PM	55.4
12:11:24 PM	58.4
12:12:24 PM	53.9
12:13:24 PM	59.3
12:14:24 PM	51.5
12:15:24 PM	56.5
12:16:24 PM	56.5

12:17:24 PM	59.8
12:18:24 PM	58

Logged Data Chart

Holy Innocents_ST-5: Logged Data Chart



Noise Measurement Report Form

Project: Holy Innocents School Contract No (s): N/A

Date: 11/30/21 Day of Week: Tuesday Time: 12:02pm

Monitoring Site Number: ST-S Monitoring Site Address: 2533 Pine

Measurement Taken By: Billy

Approximate Wind Speed: 1 mph [km/hr] Approximate Wind Direction: From the South

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Project Site: 125(ft).

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: Serial Number:

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15m

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114 dba	n/a	n/a
L_{eq}	57.3 dba		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. · train horn sounds
· flight note, propeller planes
2. · Willow Street traffic noise audible
· Christmas music from decorations
3. on the frontyards of houses in
the area, but not as audible
4. as traffic noise.

S275

Site 6: 2442 Pine Avenue

Session Report

3/30/2022

Information Panel

Name	Holy Innocents_ST-6
Start Time	11/30/2021 11:38:01 AM
Stop Time	11/30/2021 11:53:01 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	61.1 dB	Lmax	1	80.1 dB
Lmin	1	48 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

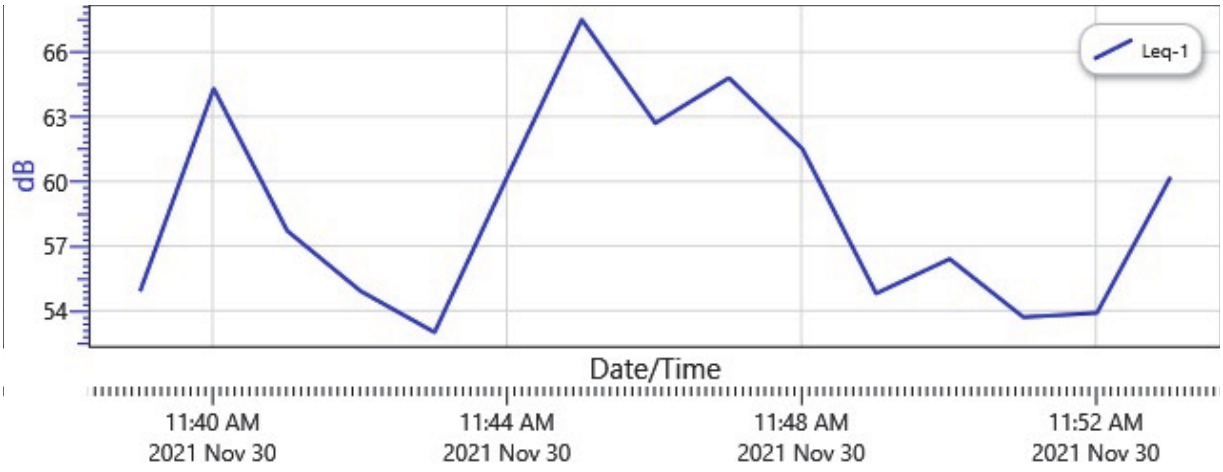
Logged Data Table

Date/Time	Leq-1
11/30/2021 11:39:01 AM	54.9
11:40:01 AM	64.3
11:41:01 AM	57.7
11:42:01 AM	54.9
11:43:01 AM	53
11:44:01 AM	60.3
11:45:01 AM	67.5
11:46:01 AM	62.7
11:47:01 AM	64.8
11:48:01 AM	61.5
11:49:01 AM	54.8
11:50:01 AM	56.4
11:51:01 AM	53.7

11:52:01 AM	53.9
11:53:01 AM	60.2

Logged Data Chart

Holy Innocents_ST-6: Logged Data Chart



Noise Measurement Report Form

Project: Holy Innocents School Contract No (s): N/A

Date: 11/30/21 Day of Week: Tuesday Time: 11:38 AM

Monitoring Site Number: ST-6 Monitoring Site Address: 2442 Pine Ave.

Measurement Taken By: Billy

Approximate Wind Speed: 1 mph [km/hr] Approximate Wind Direction: From the South

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Project Site: 425 feet.

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: Serial Number:

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15m

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114 dba	n/a	n/a
L_{eq}	61.1 dba		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. · flight route, propeller planes flying low
2. · light sawing noises in the distance
3. · car and motorcycle noise
4.

S274

APPENDIX D

Traffic and Parking Analysis

Holy Innocents Church and School Expansion Traffic and Parking Impact Analysis

Draft Report

October 24, 2022

Submitted to:

CITY OF LONG BEACH

11548 | Prepared by **Iteris, Inc.**

Innovating Through Informatics™

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1.0 INTRODUCTION

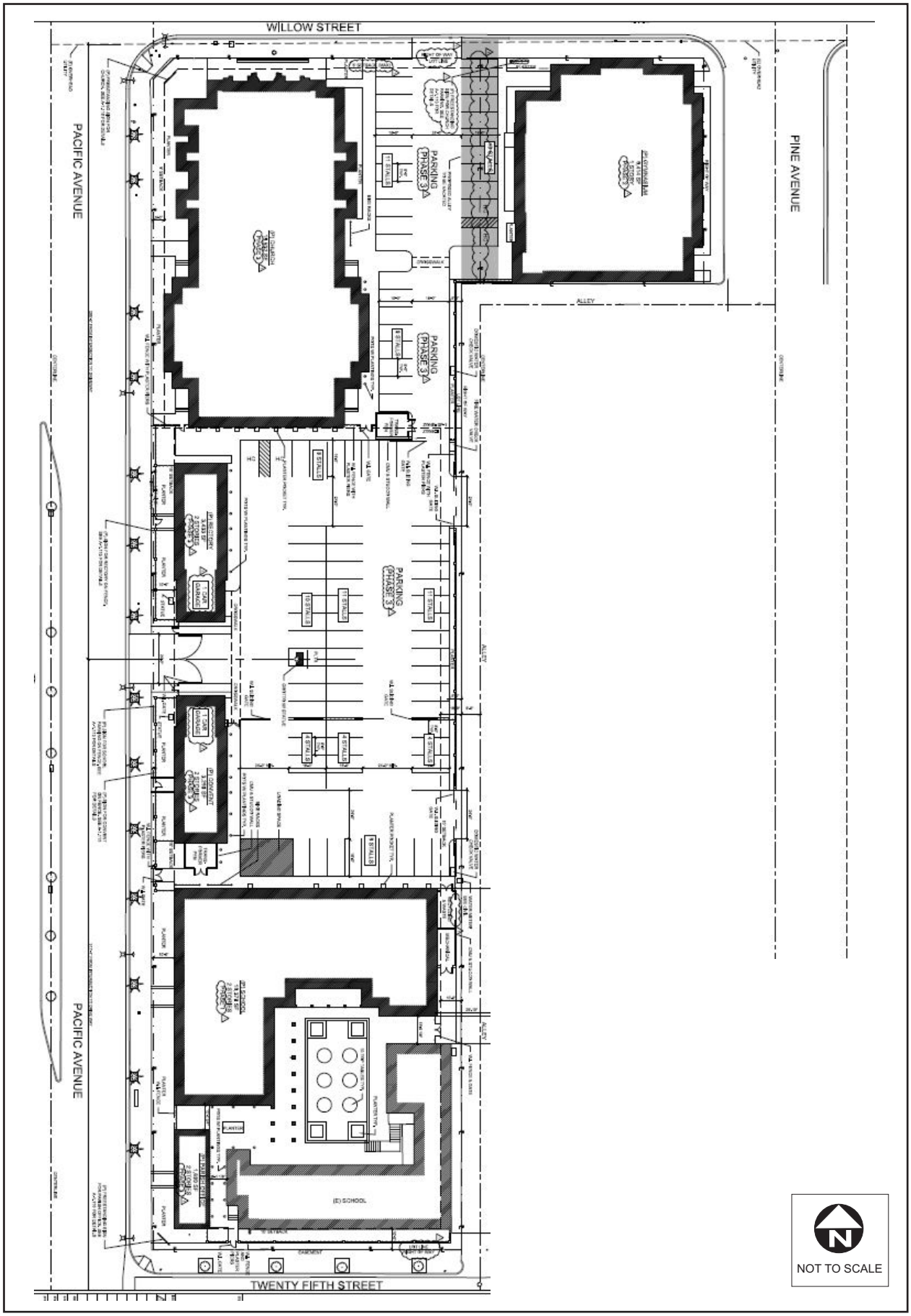
This report summarizes the results of a traffic and parking impact analysis for the proposed expansion of the Holy Innocents Church and School, located at 2500 Pacific Avenue, in the Wrigley Village neighborhood in the City of Long Beach. This report includes a California Environmental Quality Act (CEQA) and non-CEQA transportation and parking analysis based on the City's latest *Traffic Impact Analysis Guidelines*.

1.1 Project Description

The proposed project consists of the expansion of the existing Holy Innocents School, as well as construction of a new parish church. The development of the 3-phased expansion will include a parish office, a two-story school building, a single-story gymnasium, a rectory, a convent, and a church. The site currently consists of the Holy Innocents elementary and middle school, as well as a commercial building along Willow Street which will be removed. **Figure 1** illustrates the proposed project site plan.

As part of the school expansion, an additional enrollment of 92 students is anticipated. The site is located partially in the Institutional Zone (I) and partially in the Specific Plan 1 – TN Transit Node (SP-1-TN) zone and has a General Plan Land Use Designation of Neighborhood Serving Center or Corridor Low Density (NSC-L)/Transit Oriented Development Low Density (TOD-L).

Access to the project site would be provided via a driveway along Pacific Avenue, a new driveway along Willow Street (replacing the vacated alley off Willow Street), and the alley off Pine Avenue.



2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

Figure 1
Project Site Plan

2.0 ENVIRONMENTAL SETTING

This section presents an overview of the existing circulation network within the study area.

2.1 Roadway Configurations

The existing configurations of the significant roadways within the study area are described below:

- ***Pacific Avenue*** is a four-lane divided roadway, oriented in a north-south direction. On-street parking is provided within the study area and the roadway's posted speed limit is 30 mph.

- ***Willow Street*** is a six-lane divided roadway, oriented in an east-west direction, providing access to I-710 west of the project site. On-street parking is prohibited within the study area and the roadway's posted speed limit is 35 mph.

- **25th Street** is a two-lane undivided roadway, oriented in an east-west direction, along the southern end of the project site. On-street parking is provided along both sides of the street.

- **Pine Avenue** is a two-lane undivided roadway, oriented in a north-south direction. On-street parking is provided within the study area and the roadway's posted speed limit is 25 mph.

2.2 Transit, Bicycle, and Pedestrian Facilities

The study area is served by both bus and light rail. The Metro "A" Line (Blue) runs north-south along Long Beach Boulevard primarily, east of the project site. The Willow Street Station is located north of the Wrigley Market Place, approximately 0.27 miles (1,450 feet) from the project site The following bus lines serve the area:

- Long Beach Transit Lines 101, 102, 103, and 104 along Willow Street, with stops at Pacific Avenue.
- Long Beach Transit Line 182 along Pacific Avenue, with stops at Willow Street and 25th Street.

Within the study area, bicycle lanes are provided along Pacific Avenue in both directions. No bicycle facilities are provided along Willow Street. Pedestrian facilities (sidewalks) are provided along all adjacent streets (Willow Street, Pacific Avenue, 25th Street, and Pine Avenue). At the signalized Pacific Avenue/Willow Street intersection, continental style crosswalks are provided at all four legs.

3.0 PROPOSED PROJECT TRAFFIC

The first step in analyzing the traffic conditions with the project is to estimate the number of new trips expected to be generated by the proposed project. Project trip generation is also used by the City as a screening mechanism. This section describes the methodology used to determine project trip generation and the distribution of project traffic within the study area. The forecast trip generation for the project is calculated using Institute of Transportation Engineers (ITE) *Trip Generation 10th Edition* manual.

3.1 Project Trip Generation

The number of trips forecast to be generated by the proposed project as well as the current site land use was calculated by multiplying the trip generation rates by the respective sizes/quantities of each use. The net trip calculations assume trip discounts accounting for the project's proximity to a major transit station (Metro A Line) resulting in non-vehicular trips (i.e., walking and bicycling trips) in lieu of vehicular trips. The trip generation calculation utilizes the following ITE land uses:

- Proposed Project
  - Private School K-12 (Code 536)
  - Church (Code 560)

The commercial building on the project site, along Willow Street, consists of a doctor's office, a classroom, and a storage area for one of the parish ministries. However, current traffic generation is considered to be minimal, thus no trip credits are taken as part of the trip generation calculations. The results of the calculations are shown in **Table 1**.

Table 1: Proposed Project Trip Generation

Land Use (ITE Code)	Size	Units	Trip Generation Rates							Trip Generation						
			AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total		In	Out	Total	In	Out	Total	
Private School K-12 (536)	92	Students	61%	39%	0.80	43%	57%	0.17	2.48	45	29	74	22	31	53	228
Church (560)	19.532	tsf	60%	40%	0.33	45%	55%	0.49	6.95	4	2	6	5	6	10	136
Transit Oriented Development (TOD) Reduction (10%)										*-5*	*-3*	*-8*	*-3*	*-4*	*-6*	*-36*
NET PROJECT TOTAL										**44**	**28**	**72**	**24**	**33**	**57**	**328**

As shown in **Table 1**, the proposed project is forecast to generate 72 net new a.m. peak hour trips, 57 net new p.m. peak hour trips, and 328 net new daily trips.

4.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) TRANSPORTATION ANALYSIS

This section provides the California Environmental Quality Act (CEQA) transportation analysis of the proposed project.

4.1 Impact Analysis

The project's impacts are also evaluated per Appendix G of the current CEQA guidelines, which assesses projects by the four criteria listed below:

a. *Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*
b. *Would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*
c. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
d. *Would the project result in inadequate emergency access?*

The proposed project's potential CEQA transportation impacts are evaluated as follows:

a. *Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Less than Significant Impact: The proposed project consists of an expansion of the current school and addition of church-related facilities. Thus, the project does not propose land uses that are inconsistent with current uses on the site. The proposed project's zoning is consistent with the City's General Plan.

In addition, the proposed project would not negatively affect the existing bus stops along Willow Street and Pacific Avenue and the sidewalks along Willow Street, Pacific Avenue, and Pine Avenue.

Therefore, the proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

b. *Would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

As described in the City's guidelines, conditions may exist that would screen out a project from CEQA analysis. These conditions may include a project's size, location, land use type, density, etc. If certain conditions are met, it can be presumed that a land development project would be presumed to have a less than significant impact under CEQA Guidelines section 15064.3, subdivision (b). The applicable

screening criteria evaluated for the proposed Holy Innocents project is "Presumption of Less Than Significant Impact for Small Projects" (Section 2.2.1). Given that the project is anticipated to generate less than 500 daily trips (as shown in Section 3.1), the project can be considered a small project. Therefore, based on the screening criteria, further analysis is not required and the project's impacts are considered to be less than significant.

Less than Significant Impact: Given that the project is anticipated to generate less than 500 daily trips (as shown in Section 3.1), the project can be considered a small project. Therefore, based on the screening criteria, further analysis is not required and the project's impacts are considered to be less than significant.

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

Less than Significant Impact: Parking for the project would be provided via a driveway along Pacific Avenue, a new driveway along Willow Street (replacing the vacated alley off Willow Street), and the alley off Pine Avenue. Driveway access will be designed to City standards to ensure no hazardous design features related to vehicle and pedestrian mobility (sharp curves, line of sight obstructions) are included. Thus, the project would not substantially increase hazards due to a geometric design feature or incompatible uses.

d. *Would the project result in inadequate emergency access?*

Less than Significant Impact: Emergency access to the project site would be available on the west side of the property along Pacific Avenue, from the east side of the property from the alley, along the south property line from 25th Street, and from the north side of the property along Willow Street. Discussions with the Fire Department confirmed that adequate fire hose pull access would be available and there will be no need for the fire apparatus to maneuver on site. Thus, the project would not result in inadequate emergency access.

5.0 NON-CEQA ANALYSIS

This section presents the non-CEQA analysis of the project's effects on traffic circulation and parking, per the City's guidelines.

5.1 Traffic Operations Analysis Methodology

Intersections are typically considered to represent the most critical locations for traffic flow bottlenecks and general congestion on roadways. Conflicting traffic movements are created at intersections since the right-of-way must be shared by opposing traffic streams. For purposes of this study, intersection level of service (LOS) is measured to determine the peak hour operating conditions at the study intersections.

Traffic operations analysis was conducted utilizing the Highway Capacity Manual methodology. HCM methodology defines LOS by the average vehicle delay experienced by all vehicles traveling through the intersection. **Table 2** presents a brief description of each level of service letter grade, as well as the range of HCM average intersection delay associated with each grade for signalized intersections.

Table 2: Intersection Level of Service Definitions – HCM Methodology

Level of Service	Description	Signalized Intersection Delay (seconds per vehicle)	Unsignalized Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10	≤ 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 and ≤ 20	>10 and ≤ 15
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>20 and ≤ 35	>15 and ≤ 25
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>35 and ≤ 55	>25 and ≤ 35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>55 and ≤ 80	>35 and ≤ 50
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 80	> 50

Source: Highway Capacity Manual 2000, Transportation Research Board, Washington, D.C., 2000.

5.2 Existing Conditions

This section presents the existing traffic operations in the study area. The proposed study area for site access analysis includes the following three (3) intersections in the vicinity of the project site:

1. Pacific Avenue/Willow Street;
2. Pacific Avenue/25th Street; and
3. Pine Avenue/Willow Street.

The study intersections for analysis were selected based on the forecast trip generation and expected distribution of project-generated trips, in coordination with City staff. The project site location and proposed study intersections are shown in **Figure 2**.

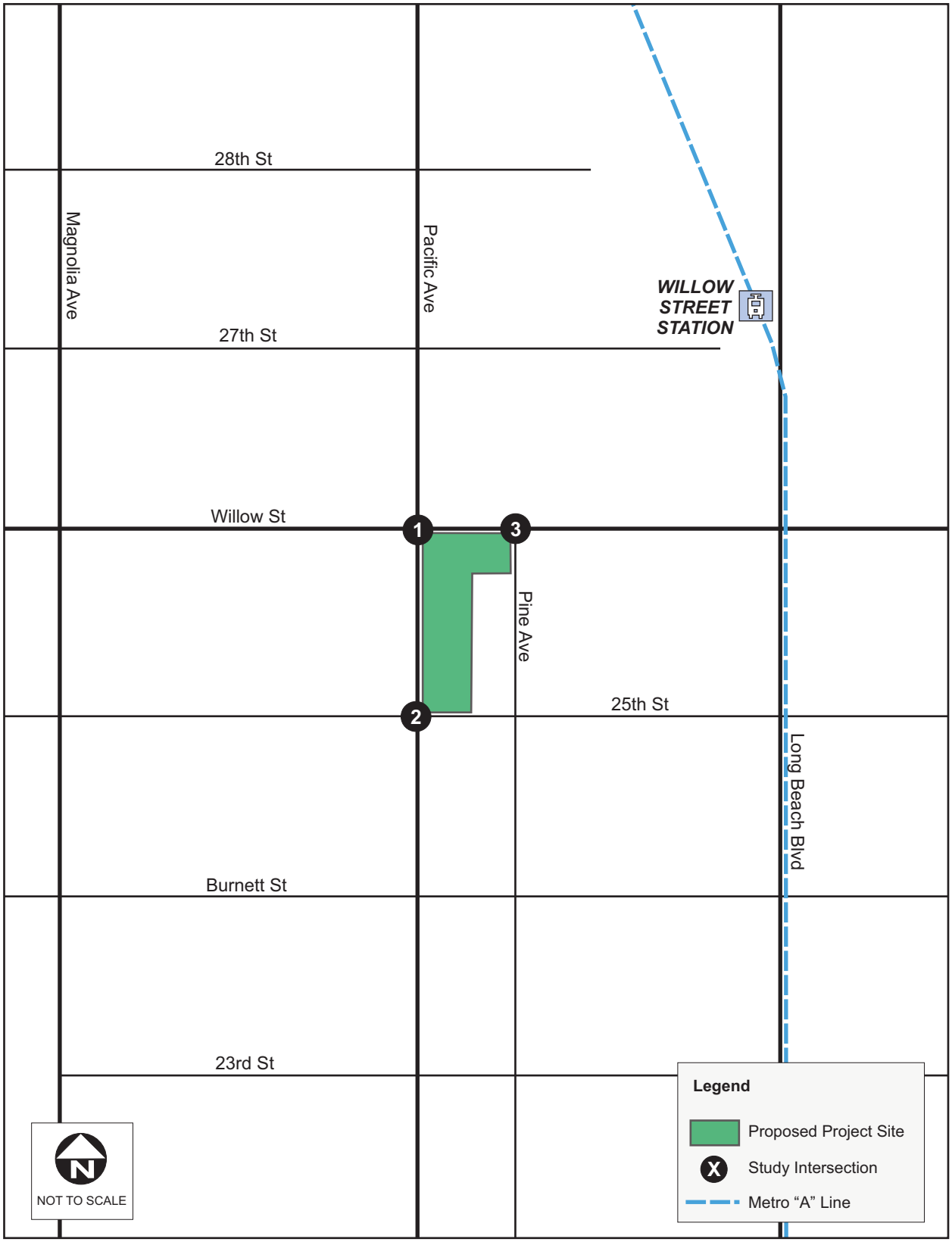
Traffic operations were evaluated for each of the following scenarios:

- Existing Conditions;
- Opening Year 2027 Without Project Conditions; and
- Opening Year 2027 With Project Conditions.

Based on construction information provided by the project team, the projected opening year for the proposed project is 2027 (completion of Phase 3 of the project).

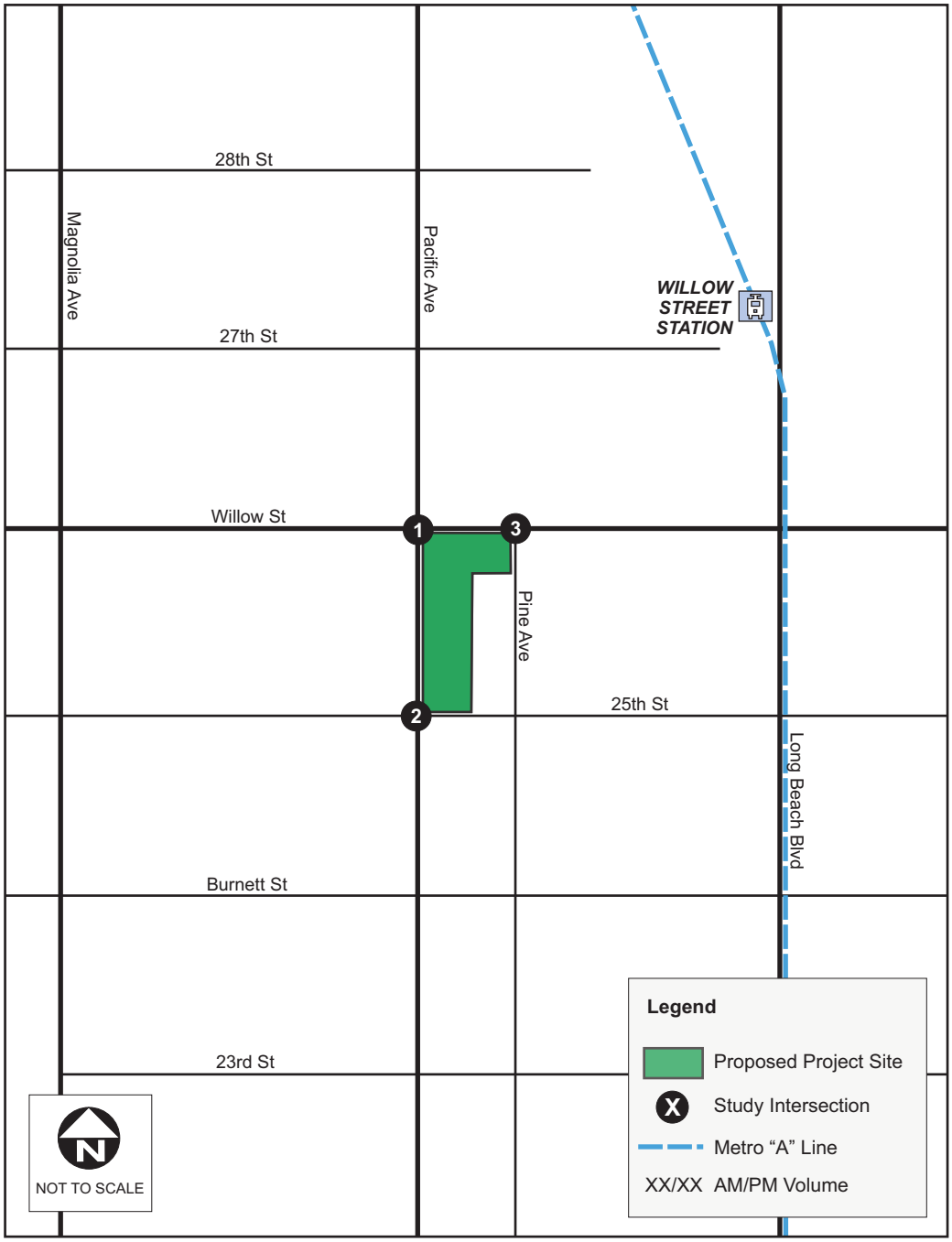
5.2.1 Existing Traffic Volumes

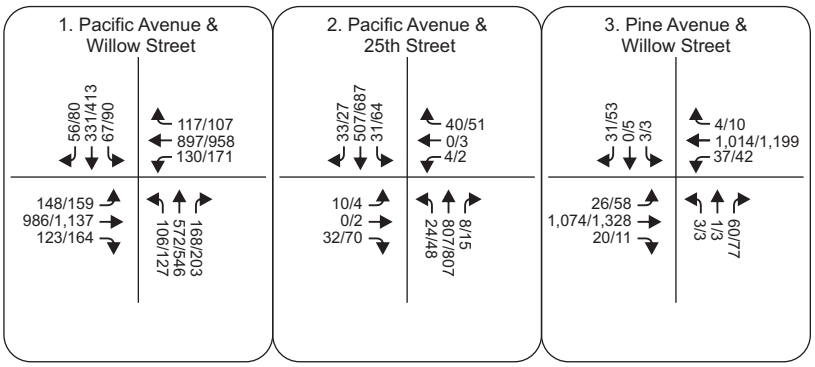
New traffic data was collected at the study intersections in February 2022, during a typical weekday. The counts were collected during the a.m. peak period (7:00 – 9:00) and p.m. afternoon period (2:00 – 4:00), in order to capture peak school drop-off and pick-up conditions. Detailed vehicle turning movement data are included in **Appendix A**. **Figure 3** shows the existing peak hour volumes at the study intersections.



2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

Figure 2
Study Intersections





2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

Figure 3
Existing Intersection Volumes

5.2.2 Existing Intersection Levels of Service

A level of service analysis was conducted to evaluate existing intersection operations at the study intersections. **Figure 4** shows the existing intersection lane configurations. **Table 3** summarizes the existing LOS at the study intersections. LOS calculation sheets are provided in **Appendix B**.

Table 3: Existing Intersection Peak Hour Levels of Service

Intersection		Control Type	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
1	Pacific Ave/Willow St	Signalized	18.4	B	20.2	C
2	Pacific Ave/25th St	Stop-controlled	16.6	C*	17.9	C*
3	Pine Ave/Willow St	Stop-controlled	24.3	C*	**115.7**	**F***

Notes:
sec = seconds; LOS = Level of Service.
* At stop-controlled intersections, the worst-case stop-controlled movement delay/LOS is reported.

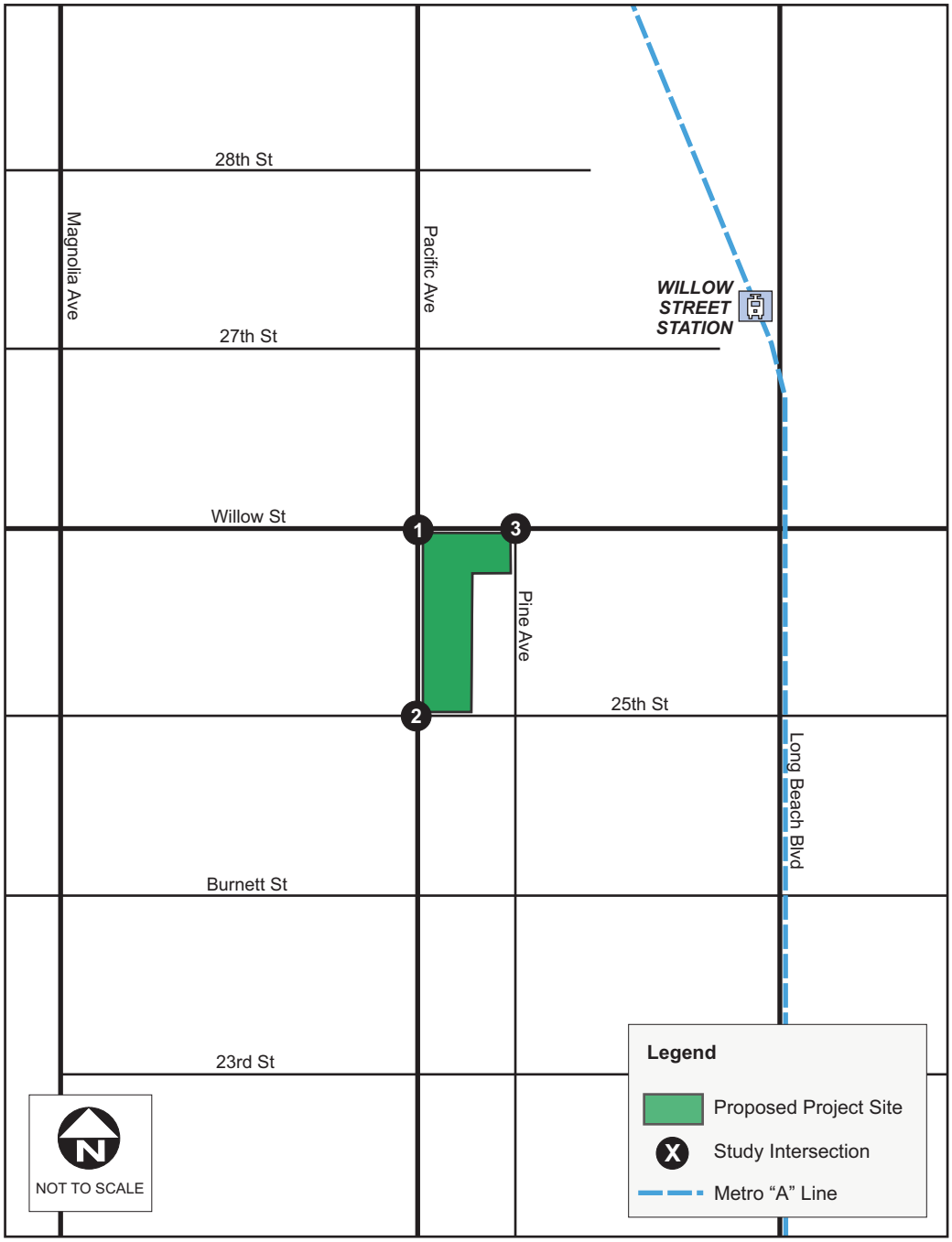
As shown in **Table 3**, the Pacific Avenue/Willow Street intersection is currently operating at LOS D or better. At the Pine Avenue/Willow Street intersection, during the p.m. peak hour, the southbound stop-controlled approach is currently experiencing delays resulting in LOS F.

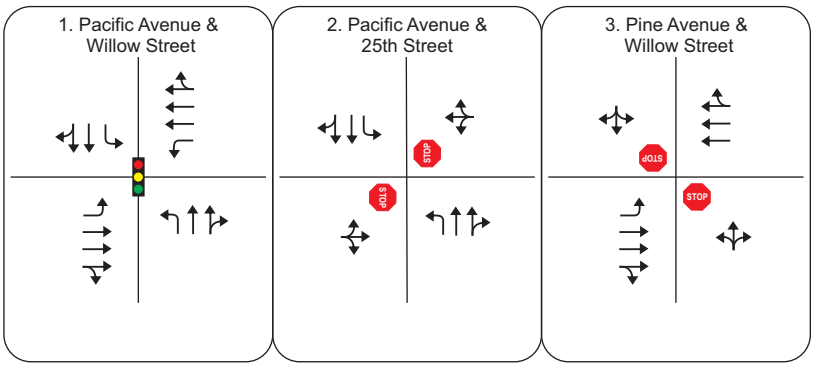
5.3 Opening Year 2027 Without Project Conditions

Based on construction information provided by the project team, the projected opening year for the proposed project is 2027 (completion of Phase 3 of the project). Opening year 2027 without project traffic volumes were developed by considering traffic increases due to ambient growth, without consideration of the proposed project.

Ambient traffic growth is the traffic growth that will occur in the study area due to general employment growth, housing growth, and growth in regional through trips in Southern California. The Southern California Association of Governments (SCAG) travel-demand model was reviewed to determine the estimated growth in traffic volumes along roadways within the study area. Based on the review of baseline (2018) and future (2040) SCAG model scenarios, the roadways within the study area are forecast to increase in traffic volumes by approximately 9% in the a.m. peak hour and 7% in the p.m. peak hour between the two scenarios. Thus, as a conservative estimate, this analysis utilizes a 1% annual growth rate for ambient traffic, which is generally considered an industry standard in the region.

A level of service analysis was conducted to evaluate opening year 2027 without project intersection operations during the weekday a.m. and p.m. peak hours. Opening year 2027 without project peak hour volumes at the study intersections are provided in **Appendix C**. **Table 4** summarizes the opening year 2027 without project levels of service at the study intersections. Level of service calculation worksheets are included in **Appendix B**.





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2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

Figure 4
Existing Intersection Configurations

Table 4: Opening Year 2027 Without Project Intersection Peak Hour Levels of Service

Intersection		Control Type	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
1	Pacific Ave/Willow St	Signalized	20.1	C	22.4	C
2	Pacific Ave/25th St	Stop-controlled	18.0	C*	17.8	C*
3	Pine Ave/Willow St	Stop-controlled	27.3	D*	**166.4**	**F***

Notes:
s = seconds, LOS = Level of Service.
* At stop-controlled intersections, the worst-case stop-controlled movement delay/LOS is reported.

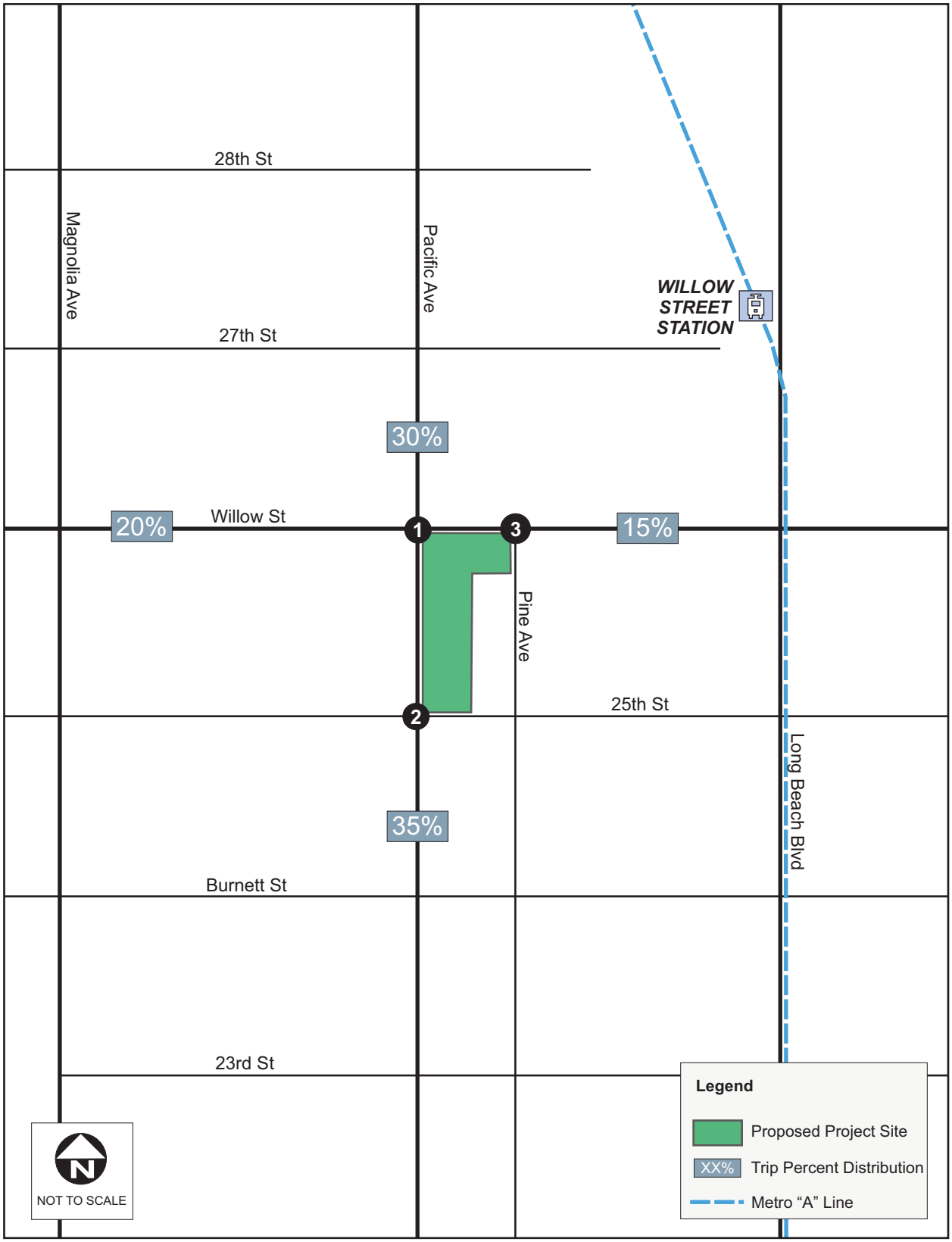
As shown in **Table 4**, the Pacific Avenue/Willow Street intersection is forecast to continue operating at LOS D or better. The increase in background traffic is forecast to worsen delays at the stop-controlled movements. The deficient operation of the Pine Avenue/Willow Street intersection is due to the delay at the southbound stop-controlled approach.

5.4 Opening Year 2027 With Project Conditions

This section presents the distribution and assignment of project-related trips, as well as the opening year 2027 with project intersection levels of service.

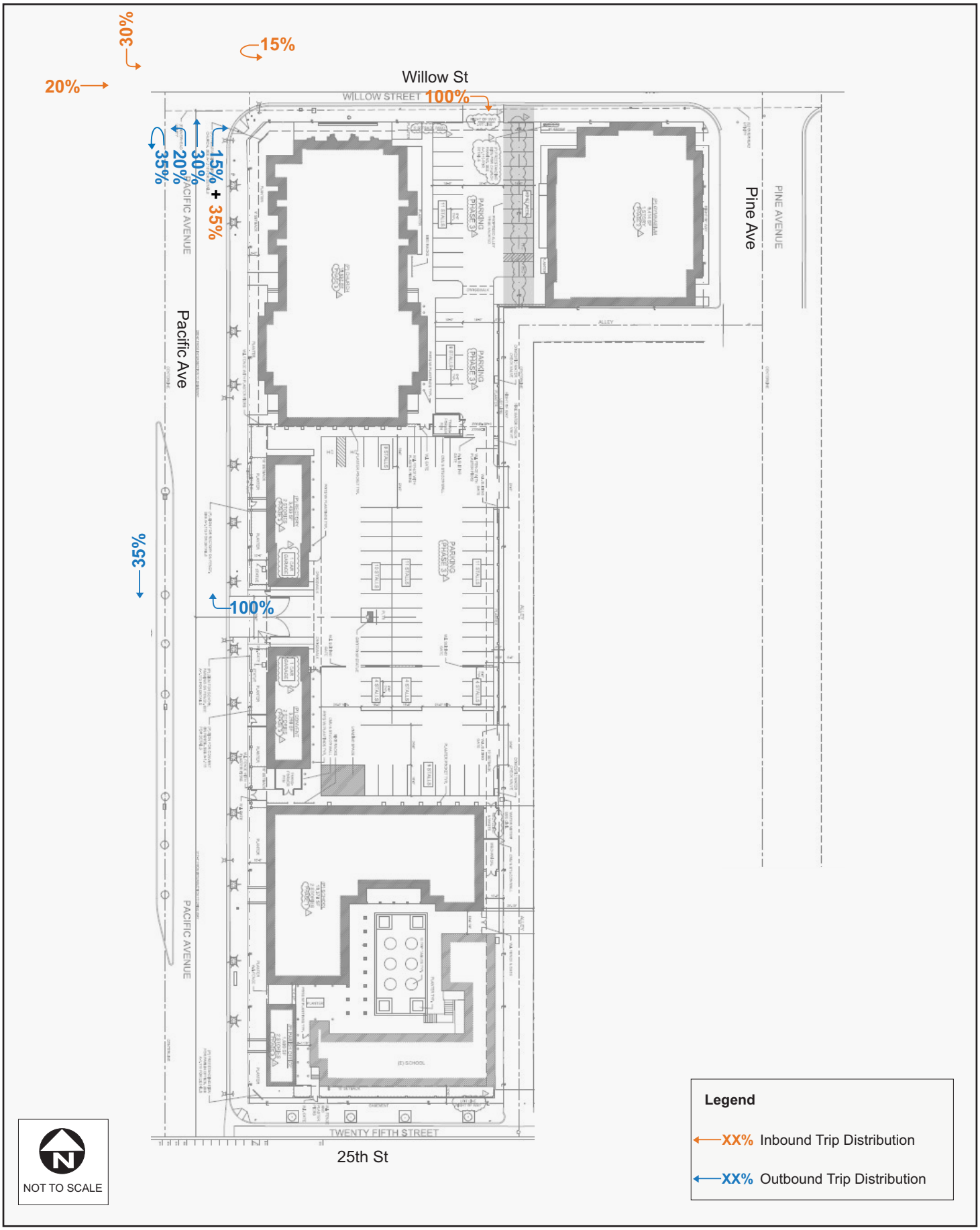
5.4.1 Project Trip Distribution and Assignment

Trip distribution assumptions are used to determine the origin and destination of new vehicle trips associated with the project. The overall project trip distribution and trip distribution at access points are shown in **Figures 5 and 6,** respectively. The new trips generated by the project are then assigned to the surrounding roadway system based on the distribution patterns to estimate the project-related peak-hour traffic at each of the study intersections. **Figure 7** illustrates the proposed project trip assignment onto the roadway network.



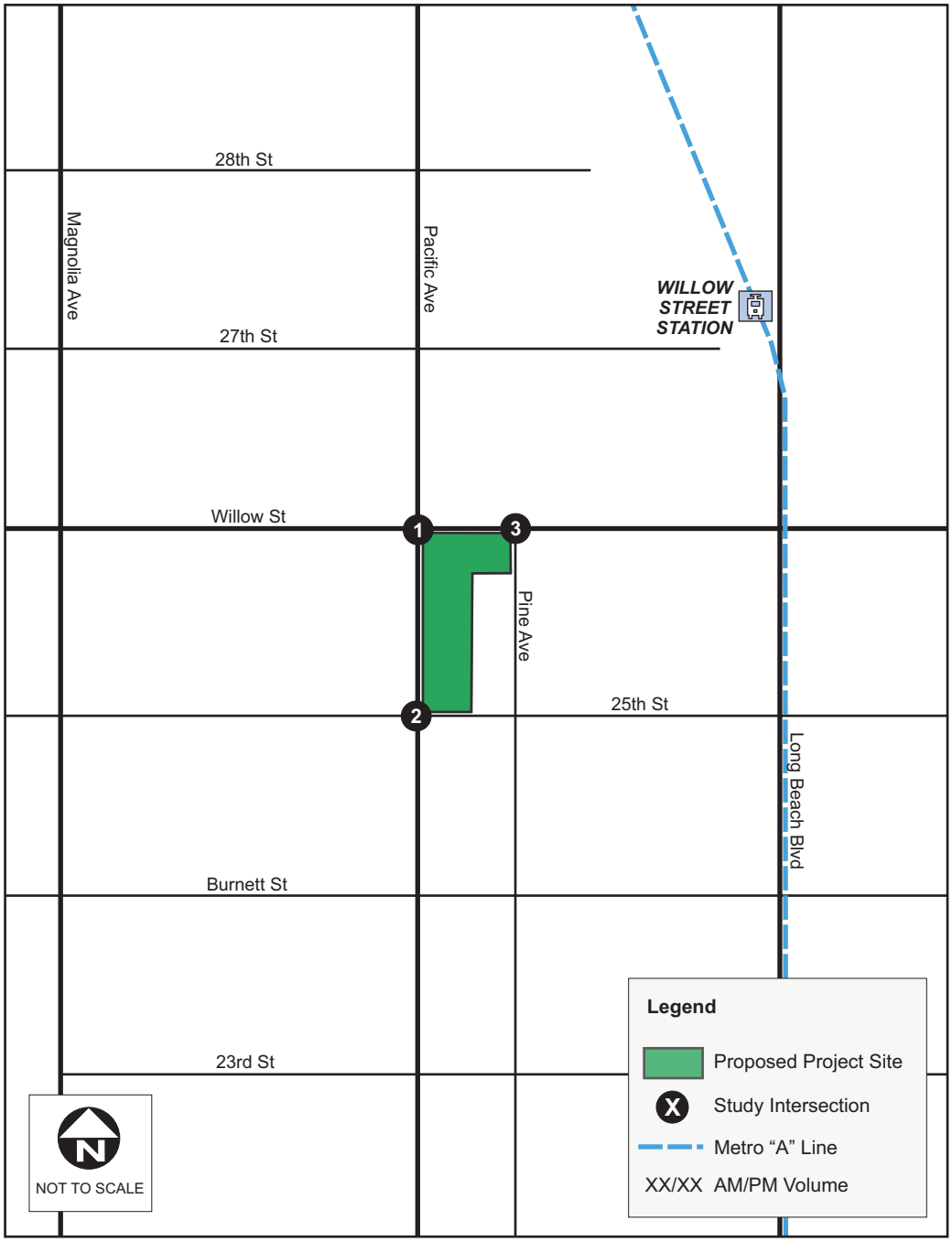
2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

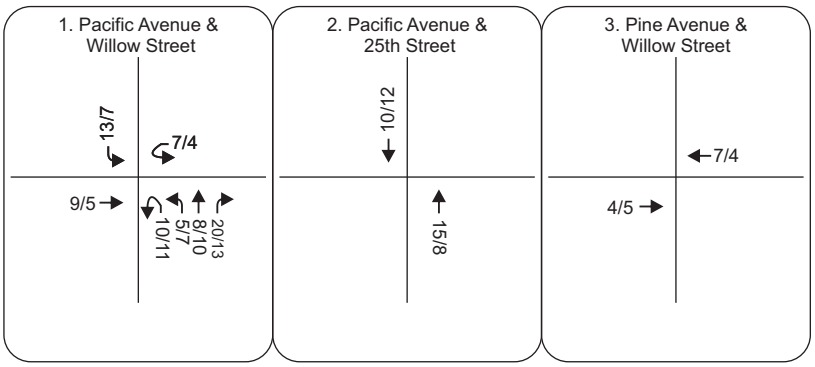
Figure 5
Project Trip Distribution



2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

Figure 6
Project Site Access Trip Distribution





2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

Figure 7
Project Trip Assignment

5.4.2 Intersection Analysis

Opening year 2027 with project conditions were developed by adding trips generated by the proposed project to opening year 2027 without project volumes. Opening year 2027 with project traffic volumes at the study intersections are provided in **Appendix C**.

A level of service analysis was conducted to evaluate opening year 2027 with project intersection. **Table 5** summarizes the opening year 2027 with project levels of service at the study intersections. Level of service calculation worksheets are included in **Appendix B**.

Table 5: Opening Year 2027 With Project Intersection Peak Hour Level of Service

Intersection		Opening Year 2027 Without Project Conditions				Opening Year 2027 With Project Conditions				Change in Delay (s)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS		
1	Pacific Ave/Willow St	20.1	C	22.4	C	21.8	C	23.6	C	1.7	1.2
2	Pacific Ave/25th St	18.0	C*	17.8	C*	18.3	C*	19.4	C*	0.3	1.6
3	Pine Ave/Willow St	27.3	D*	**166.4**	**F***	27.4	D*	**166.4**	**F***	0.1	0.0

Notes:
s = seconds, LOS = Level of Service.
* At stop-controlled intersections, the worst-case stop-controlled movement delay/LOS is reported.

As shown in **Table 5**, project-related increases in peak hour intersection delay at the study intersections are forecast to be minimal.

5.5 Congestion Management Program Analysis

The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. According to the CMP Traffic Impact Analysis (TIA) Guidelines developed by Metro, a CMP traffic impact analysis is required given the following conditions:

- CMP arterial monitoring intersections, including freeway on- or off-ramps, where the proposed project would add 50 or more trips during either the AM or PM weekday peak hours.

Based on the project trip assignment, the project is not forecast to add 50 peak hour trips at any of the study intersections. Therefore, a separate CMP traffic impact analysis was not conducted.

5.6 Parking Analysis

This section provides an evaluation of current parking conditions as well as future parking conditions as a result of the proposed project.

5.6.1 Existing Parking Conditions

On-street parking is provided adjacent to the project site as follows:

- Both sides of Pacific Avenue. On the east side, parking is prohibited from 7:00 a.m. to 5:00 p.m. on school days and from 5:00 to 8:00 a.m. on Tuesdays (for street cleaning);
- Both sides of 25th Street. Parking is only restricted for weekly street cleaning (Wednesday on the north side and Tuesday on the south side);
- Both sides of Pine Avenue. Similar to 25th Street parking is only restricted for weekly street cleaning (Tuesday on the east side and Wednesday on the west side).
- On-street parking is prohibited along Willow Street.

Within the current school site, approximately 70 to 75 parking spaces are provided (parking space markings are faded). Based on a field visit conducted on a typical weekday, during late morning (10:00 – 11:30 a.m.) with school in session, it was observed that only 7 to 8 vehicles were parked in the parking lot. Thus, the current parking lot is underutilized.

5.6.2 Shared Parking Analysis

A shared parking analysis was conducted to determine the future parking demand of the project site, given the multi-use characteristics of the proposed project. The proposed project includes an expansion of the current Holy Innocents school and the addition of church facilities. A total of 93 parking spaces will be provided on the site, comprised of 89 spaces in the interior parking lot, 2 spaces within two single-car garages, and 2 loading spaces for trucks.

Shared parking methodology recognizes that parking demand for each type of land use varies by time of day as well as day of week. Typically, Urban Land Institute (ULI) time-of-day factors are used for shared parking analyses. However, parking demand data for church and school land uses are not provided within that publication. Thus, operational information from the project applicant is used in order to determine the peak parking demands for the project. **Table 6** summarizes the parking requirements based on City code, considering each component of the site.

Table 6: City Code Parking Requirements

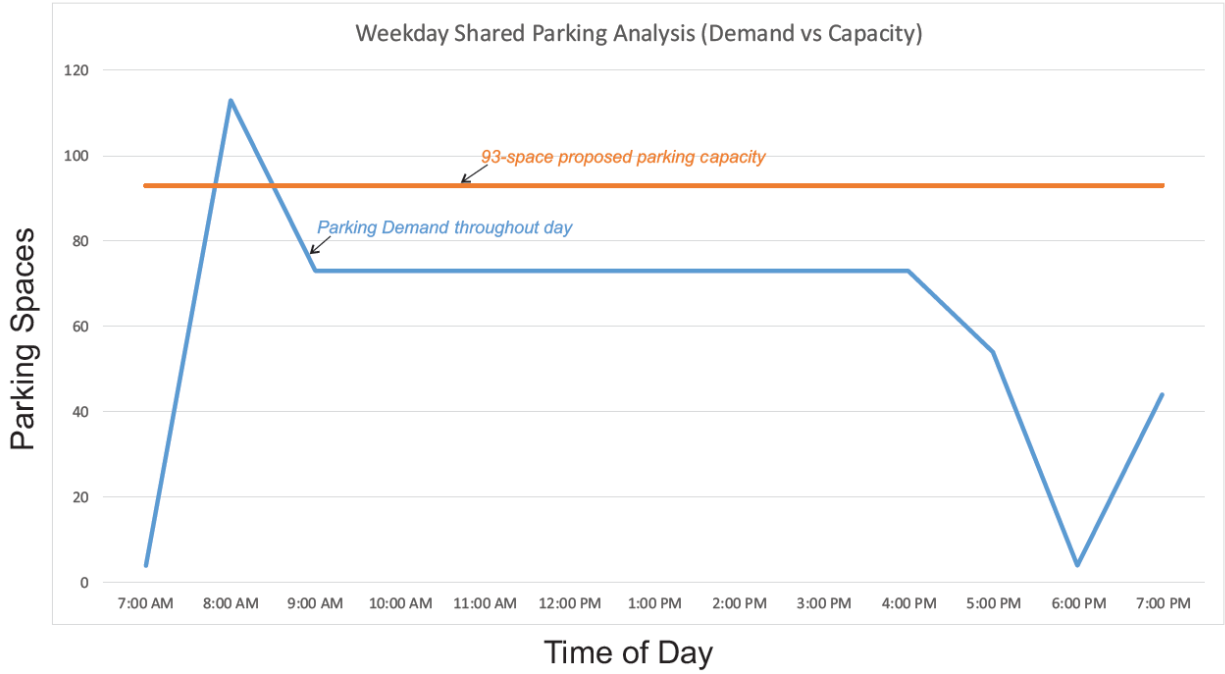
Parking Standard/Rate	Size	Parking Standard/Rate	Required Parking
School (Elementary)	11 classrooms	2 spaces per classroom + 2 loading/unloading	22 spaces + 2 loading
School (High School)	4 classrooms	7 spaces per classroom	28 spaces
Parish Office	1,680 sq ft	4 spaces per 1,000 sq ft	6.72 spaces
Gymnasium	9,414	2 spaces per 1,000 sq ft	18.828 spaces
Rectory	3 bedrooms	1 space per 2 beds	1.5 spaces
Convent	5 bedrooms	1 space per 2 beds	2.5 spaces
Church	19,532 sq ft	2 spaces per 1,000 sq ft	39.064 spaces
		Total	**121 spaces**

As shown, a total of 121 parking spaces would be required based on City code (rounded up when square footage was used as part of the standard). The following summarizes the operational schedule for the site, for which the shared parking analysis is based on:

- Weekdays
  - School would operate from 7:30 a.m. to 5:30 p.m. (with instructional hours starting at 8:00 a.m.)
  - Church would hold masses at 8:00 a.m. and 7:00 p.m. (with confessions at 7:00 p.m. on Fridays)
  - Gymnasium would operate from 8:00 a.m. to 6:00 p.m. (utilized by students who would already be on campus)
- Weekends
  - School would be closed
  - Church would hold masses at 8:00 a.m. and 5:00 p.m. on Saturdays. On Sundays, masses would be held at 7:00 a.m., 9:00 a.m., 11:00 a.m., and 1:00 p.m.
  - Gymnasium would be closed

Given the schedule described, **Figure 8** presents the weekday shared parking analysis time-of-day graph, showing forecast parking demand (fluctuating throughout a typical weekday) versus the site's parking capacity. The weekday condition would govern for this analysis, as the weekend parking demand would be generated by the church only (thus no overlap with other uses).

Figure 8 – Shared Parking Graph



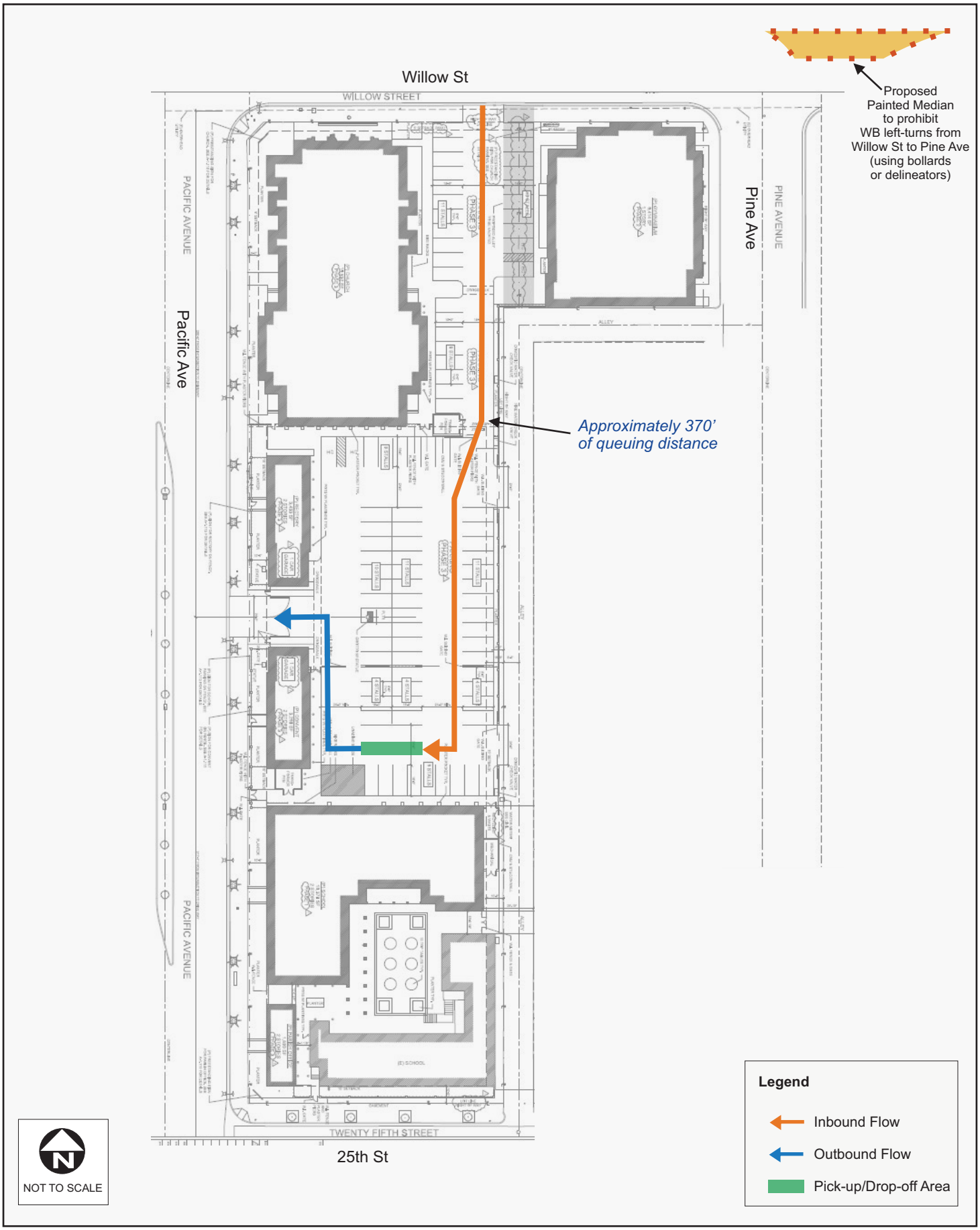
As shown, the primary uses on the site, church and school, would only overlap parking demand during the weekday 8:00 a.m. hour. This may result in parking demand exceeding capacity during this hour. However, given the limited attendance of the church on weekdays, it is unlikely that the 39 spaces (City code requirement) would be filled up.

Note that as of the finalizing of this study, California enacted Assembly Bill (AB) 2097, which waives parking requirements for all uses, except hotel, within proximity to transit priority areas. The project site is within a transit priority area, and as such, pursuant to AB 2097, is not subject to minimum parking requirements. Therefore, the proposed project provides adequate parking.

5.7 Internal Circulation Analysis

This section presents the proposed internal circulation for the project, particularly during morning student drop-off and afternoon student pick-up times. The proposed plan includes inbound vehicle access provided at the driveway along Willow Street (right-turn in only), with outbound vehicle access provided at the driveway along Pacific Avenue (right-turn out only). This configuration would allow for adequate on-site queuing space for vehicles (within the parking lot), thus avoiding spillback onto public streets.

Figure 9 shows the proposed circulation plan. Note that with the right-turn only configuration at the two access points, some vehicles will need to either need to make a U-turn or circulate on local streets. For example, outbound vehicles destined for the south would not be able to turn left onto Pacific Avenue (due to the raised median). Instead, these vehicles would either need to make a northbound-to-southbound U-turn at the Pacific Avenue/Willow Street intersection, or a left or right-turn at the Pacific Avenue/Willow Street intersection to utilize a local street to travel southbound. In order to prevent cut-through traffic on Pine Avenue, it is recommended that the applicant work with the City to eliminate the westbound left-turn pocket at the Willow Street/Pine Avenue intersection and provide a median to enforce left turn restrictions. It is recommended that the median be constructed using bollards or delineators, as opposed to a concrete/raised median.



2500 Pacific Avenue (Holy Innocents Church/School)
City of Long Beach
Traffic and Parking Impact Analysis

Figure 9
Internal Circulation
(School Pick-up & Drop-off)

6.0 CONCLUSIONS

The proposed project, located at 2500 Pacific Avenue in the City of Long Beach, consists of the expansion of the existing Holy Innocents School, as well as construction of a new parish church.

The results of the analysis are as follows:

- The proposed project is forecast to generate 72 net new a.m. peak hour trips, 57 net new p.m. peak hour trips, and 328 net new daily trips.
- CEQA Analysis
  - Based on the City's screening criteria, since the project is forecast to generate less that 500 daily trips, the project's impacts are considered to be less than significant.
- Non-CEQA Analysis
  - Project-related increases in peak hour intersection delay at the Pacific Avenue/Willow Street intersection are forecast to be minimal.
  - At the Pacific Avenue/25th Street intersection, the increase in traffic in the p.m. peak hour is forecast to result in the worsening of stop-controlled delay at the westbound 25th Street approach.
- Shared Parking Analysis
  - Based on the operational characteristics of the proposed site, the proposed parking capacity of the project site is forecast to satisfy the peak parking demand. In addition, given that the project is within a transit priority area, pursuant to AB 2097, the proposed project is not subject to minimum parking requirements. Thus, the proposed project provides adequate parking.

Holy Innocents Church and School Expansion
Traffic and Parking Impact Analysis

Technical Appendix

Submitted to:

CITY OF LONG BEACH

11548 | Prepared by **Iteris, Inc.**

Innovating Through Informatics™

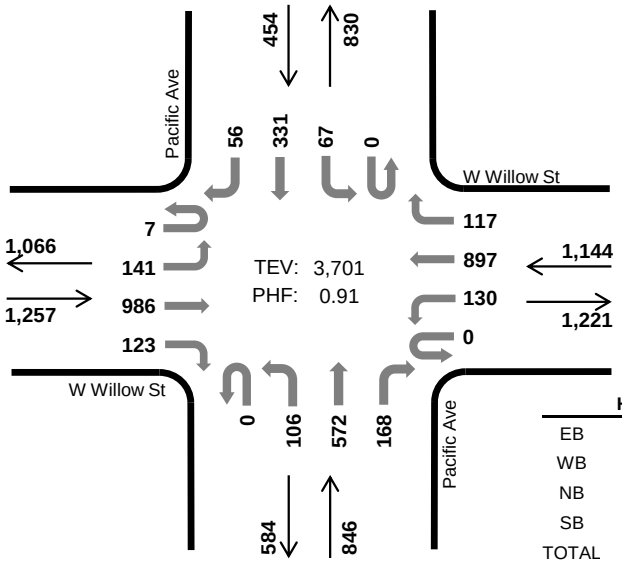
APPENDIX A – EXISTING TRAFFIC COUNTS

Pacific Ave
W Willow St

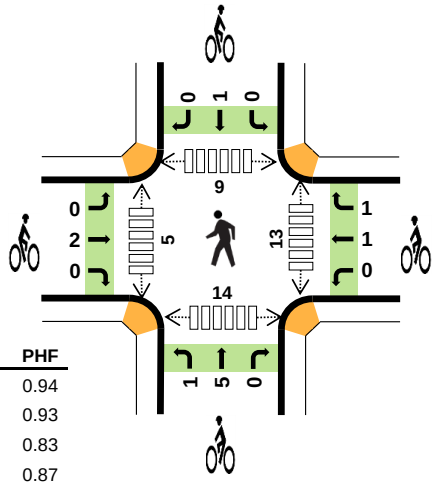
Date: 02-16-2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	1.5%	0.94
WB	2.5%	0.93
NB	0.6%	0.83
SB	1.8%	0.87
TOTAL	1.6%	0.91



Two-Hour Count Summaries

Interval Start		W Willow St Eastbound UT	LT	TH	RT	W Willow St Westbound UT	LT	TH	RT	Pacific Ave Northbound UT	LT	TH	RT	Pacific Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		1	28	163	18	0	17	108	18	0	19	70	39	0	9	52	8	550	0
7:15 AM		0	25	201	18	1	18	140	20	0	21	109	28	0	16	81	13	691	0
7:30 AM		**2**	**30**	**219**	**26**	**0**	**29**	**222**	**29**	**0**	**27**	**149**	**39**	**0**	**20**	**96**	**15**	**903**	0
7:45 AM		**1**	**33**	**274**	**28**	**0**	**33**	**241**	**34**	**0**	**29**	**178**	**48**	**0**	**20**	**87**	**13**	**1,019**	3,163
8:00 AM		**3**	**41**	**255**	**32**	**0**	**41**	**225**	**26**	**0**	**29**	**130**	**49**	**0**	**15**	**74**	**12**	**932**	3,545
8:15 AM		**1**	**37**	**238**	**37**	**0**	**27**	**209**	**28**	**0**	**21**	**115**	**32**	**0**	**12**	**74**	**16**	**847**	**3,701**
8:30 AM		0	44	241	27	0	33	162	26	0	29	110	31	0	16	75	23	817	3,615
8:45 AM		0	28	231	39	0	37	159	27	0	31	98	45	0	13	76	11	795	3,391
Count Total		8	266	1,822	225	1	235	1,466	208	0	206	959	311	0	121	615	111	6,554	0
Peak Hour	**All**	**7**	**141**	**986**	**123**	**0**	**130**	**897**	**117**	**0**	**106**	**572**	**168**	**0**	**67**	**331**	**56**	**3,701**	**0**
	HV	**0**	**3**	**14**	**2**	**0**	**5**	**23**	**1**	**0**	**0**	**5**	**0**	**0**	**2**	**5**	**1**	**61**	**0**
	HV%	**0%**	**2%**	**1%**	**2%**	**-**	**4%**	**3%**	**1%**	**-**	**0%**	**1%**	**0%**	**-**	**3%**	**2%**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	5	7	2	3	*17*	0	0	0	0	*0*	3	2	3	2	*10*
7:15 AM	4	8	3	4	*19*	1	0	0	0	*1*	10	3	9	0	*22*
7:30 AM	**5**	**5**	**1**	**3**	***14***	**0**	**0**	**0**	**0**	***0***	**3**	**3**	**1**	**5**	*12*
7:45 AM	**4**	**6**	**1**	**1**	***12***	**2**	**0**	**0**	**0**	***2***	**7**	**0**	**0**	**3**	*10*
8:00 AM	**1**	**9**	**1**	**1**	***12***	**0**	**0**	**0**	**1**	***1***	**2**	**0**	**6**	**2**	*10*
8:15 AM	**9**	**9**	**2**	**3**	***23***	**0**	**2**	**6**	**0**	***8***	**1**	**2**	**2**	**4**	***9***
8:30 AM	9	6	3	3	*21*	0	1	0	0	*1*	10	1	2	6	*19*
8:45 AM	9	5	2	3	*19*	2	0	0	0	*2*	3	1	6	5	*15*
Count Total	46	55	15	21	*137*	5	3	6	1	*15*	39	12	29	27	*107*
Peak Hour	**19**	**29**	**5**	**8**	***61***	**2**	**2**	**6**	**1**	***11***	**13**	**5**	**9**	**14**	***41***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Willow St				W Willow St				Pacific Ave				Pacific Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	1	0	2	2	3	0	0	1	1	0	0	3	0	17	0
7:15 AM	0	0	3	1	0	0	7	1	0	1	2	0	0	2	1	1	19	0
7:30 AM	**0**	**2**	**3**	**0**	**0**	**2**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**14**	0
7:45 AM	**0**	**0**	**3**	**1**	**0**	**1**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**12**	62
8:00 AM	**0**	**0**	**1**	**0**	**0**	**1**	**8**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**12**	57
8:15 AM	**0**	**1**	**7**	**1**	**0**	**1**	**7**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**23**	**61**
8:30 AM	0	1	8	0	0	0	4	2	0	0	2	1	0	0	2	1	21	68
8:45 AM	0	0	9	0	0	2	3	0	0	0	2	0	0	1	1	1	19	75
Count Total	0	4	38	4	0	9	39	7	0	1	12	2	0	5	12	4	137	0
Peak Hour	**0**	**3**	**14**	**2**	**0**	**5**	**23**	**1**	**0**	**0**	**5**	**0**	**0**	**2**	**5**	**1**	**61**	**0**

Two-Hour Count Summaries - Bikes

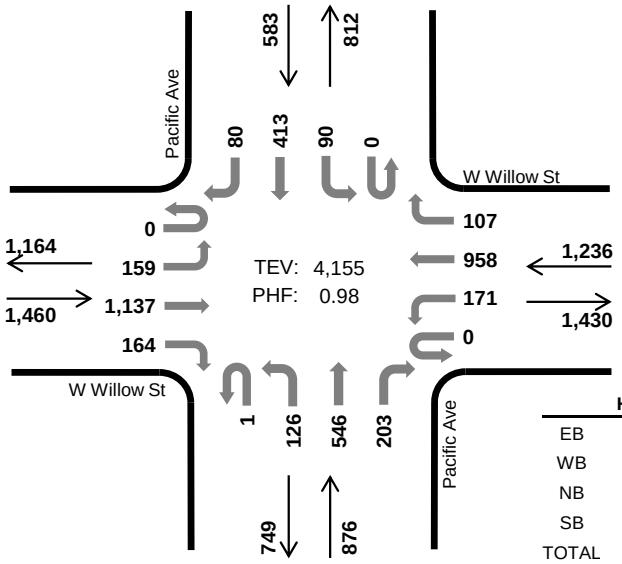
Interval Start	W Willow St			W Willow St			Pacific Ave			Pacific Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	4
8:15 AM	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**5**	**0**	**0**	**0**	**0**	**8**	**11**
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	12
8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	12
Count Total	0	5	0	0	2	1	1	5	0	0	1	0	15	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**1**	**1**	**5**	**0**	**0**	**1**	**0**	**11**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

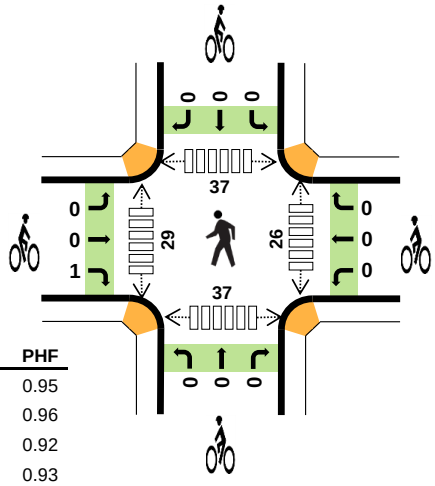
Pacific Ave
W Willow St

Date: 02-16-2022
Count Period: 2:00 PM to 4:00 PM
Peak Hour: 3:00 PM to 4:00 PM

Peak Hour



	HV %:	PHF
EB	2.1%	0.95
WB	1.5%	0.96
NB	1.8%	0.92
SB	1.9%	0.93
TOTAL	1.8%	0.98



Two-Hour Count Summaries

Interval Start		W Willow St Eastbound UT	LT	TH	RT	W Willow St Westbound UT	LT	TH	RT	Pacific Ave Northbound UT	LT	TH	RT	Pacific Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
2:00 PM		0	26	217	33	2	47	203	14	0	38	107	55	0	17	67	19	845	0
2:15 PM		0	29	277	40	1	31	209	24	0	21	130	37	0	21	99	23	942	0
2:30 PM		0	30	244	33	1	49	215	22	0	26	134	48	0	17	98	19	936	0
2:45 PM		2	32	247	36	1	57	223	39	0	35	150	37	0	31	104	20	1,014	3,737
3:00 PM		**0**	**38**	**280**	**43**	**0**	**41**	**226**	**25**	**0**	**28**	**132**	**44**	**0**	**19**	**112**	**13**	**1,001**	3,893
3:15 PM		**0**	**37**	**305**	**41**	**0**	**33**	**240**	**31**	**0**	**31**	**121**	**51**	**0**	**20**	**103**	**25**	**1,038**	3,989
3:30 PM		**0**	**56**	**267**	**45**	**0**	**48**	**241**	**29**	**1**	**32**	**145**	**59**	**0**	**26**	**93**	**16**	**1,058**	4,111
3:45 PM		**0**	**28**	**285**	**35**	**0**	**49**	**251**	**22**	**0**	**35**	**148**	**49**	**0**	**25**	**105**	**26**	**1,058**	**4,155**
Count Total		2	276	2,122	306	5	355	1,808	206	1	246	1,067	380	0	176	781	161	7,892	0
Peak Hour	**All**	**0**	**159**	**1,137**	**164**	**0**	**171**	**958**	**107**	**1**	**126**	**546**	**203**	**0**	**90**	**413**	**80**	**4,155**	**0**
	HV	**0**	**3**	**26**	**1**	**0**	**4**	**12**	**2**	**0**	**3**	**6**	**7**	**0**	**3**	**7**	**1**	**75**	**0**
	HV%	**-**	**2%**	**2%**	**1%**	**-**	**2%**	**1%**	**2%**	**0%**	**2%**	**1%**	**3%**	**-**	**3%**	**2%**	**1%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
2:00 PM	7	10	6	1	*24*	0	0	0	0	*0*	4	1	11	2	*18*
2:15 PM	11	6	4	4	*25*	0	0	0	0	*0*	8	2	7	6	*23*
2:30 PM	8	7	2	4	*21*	0	0	0	0	*0*	6	1	6	8	*21*
2:45 PM	4	8	2	0	*14*	0	0	0	0	*0*	5	4	14	5	*28*
3:00 PM	**6**	**3**	**5**	**2**	***16***	**0**	**0**	**0**	**0**	***0***	**4**	**5**	**6**	**15**	*30*
3:15 PM	**10**	**5**	**5**	**2**	***22***	**0**	**0**	**0**	**0**	***0***	**9**	**11**	**13**	**10**	*43*
3:30 PM	**11**	**7**	**5**	**3**	***26***	**1**	**0**	**0**	**0**	***1***	**3**	**5**	**12**	**2**	*22*
3:45 PM	**3**	**3**	**1**	**4**	***11***	**0**	**0**	**0**	**0**	***0***	**10**	**8**	**6**	**10**	***34***
Count Total	60	49	30	20	*159*	1	0	0	0	*1*	49	37	75	58	*219*
Peak Hour	**30**	**18**	**16**	**11**	***75***	**1**	**0**	**0**	**0**	***1***	**26**	**29**	**37**	**37**	***129***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Willow St				W Willow St				Pacific Ave				Pacific Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	1	6	0	0	1	8	1	0	1	3	2	0	0	1	0	24	0
2:15 PM	0	1	10	0	0	0	2	4	0	0	3	1	0	0	3	1	25	0
2:30 PM	0	0	8	0	0	1	3	3	0	0	0	2	0	2	1	1	21	0
2:45 PM	0	0	4	0	0	0	6	2	0	0	1	1	0	0	0	0	14	84
3:00 PM	**0**	**0**	**6**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**3**	**1**	**0**	**0**	**1**	**1**	**16**	76
3:15 PM	**0**	**0**	**9**	**1**	**0**	**0**	**4**	**1**	**0**	**0**	**2**	**3**	**0**	**1**	**1**	**0**	**22**	73
3:30 PM	**0**	**3**	**8**	**0**	**0**	**3**	**3**	**1**	**0**	**2**	**0**	**3**	**0**	**1**	**2**	**0**	**26**	78
3:45 PM	**0**	**0**	**3**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**3**	**0**	**11**	**75**
Count Total	0	5	54	1	0	6	31	12	0	4	13	13	0	5	12	3	159	0
Peak Hour	**0**	**3**	**26**	**1**	**0**	**4**	**12**	**2**	**0**	**3**	**6**	**7**	**0**	**3**	**7**	**1**	**75**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W Willow St			W Willow St			Pacific Ave			Pacific Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Count Total	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

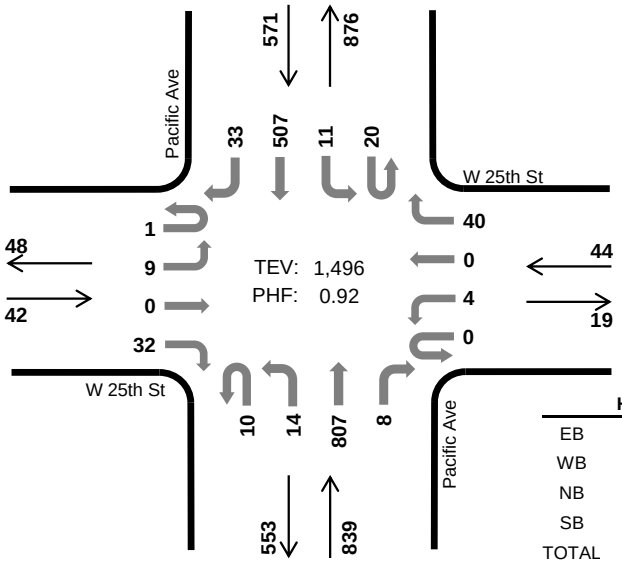
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Pacific Ave
W 25th St

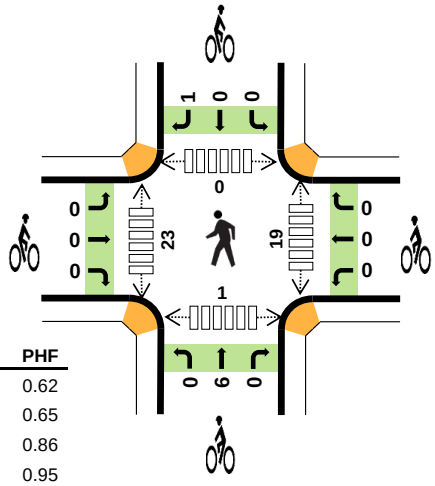
Date: 02-16-2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	2.4%	0.62
WB	0.0%	0.65
NB	0.6%	0.86
SB	2.3%	0.95
TOTAL	1.3%	0.92



Two-Hour Count Summaries

Interval Start		W 25th St Eastbound UT	LT	TH	RT	W 25th St Westbound UT	LT	TH	RT	Pacific Ave Northbound UT	LT	TH	RT	Pacific Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	1	0	3	0	1	0	2	0	4	129	3	0	3	85	1	232	0
7:15 AM		0	0	1	6	0	0	1	9	1	3	152	2	7	1	101	5	289	0
7:30 AM		**0**	**2**	**0**	**4**	**0**	**2**	**0**	**10**	**4**	**3**	**210**	**1**	**4**	**2**	**135**	**5**	**382**	0
7:45 AM		**0**	**1**	**0**	**2**	**0**	**1**	**0**	**16**	**1**	**4**	**236**	**3**	**10**	**6**	**125**	**2**	**407**	1,310
8:00 AM		**0**	**3**	**0**	**13**	**0**	**0**	**0**	**10**	**3**	**2**	**193**	**2**	**3**	**2**	**131**	**15**	**377**	1,455
8:15 AM		**1**	**3**	**0**	**13**	**0**	**1**	**0**	**4**	**2**	**5**	**168**	**2**	**3**	**1**	**116**	**11**	**330**	**1,496**
8:30 AM		0	0	2	21	0	2	2	2	2	5	157	1	6	5	120	6	331	1,445
8:45 AM		0	1	3	26	0	1	2	3	0	3	170	6	3	2	135	7	362	1,400
Count Total		1	11	6	88	0	8	5	56	13	29	1,415	20	36	22	948	52	2,710	0
Peak Hour	**All**	**1**	**9**	**0**	**32**	**0**	**4**	**0**	**40**	**10**	**14**	**807**	**8**	**20**	**11**	**507**	**33**	**1,496**	**0**
	HV	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**13**	**0**	**19**	**0**
	HV%	**100%**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**1%**	**0%**	**0%**	**0%**	**3%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	2	6	*8*	0	0	0	0	*0*	1	2	0	0	*3*
7:15 AM	0	0	4	2	*6*	0	0	1	0	*1*	6	4	0	3	*13*
7:30 AM	**0**	**0**	**1**	**4**	***5***	**0**	**0**	**0**	**0**	***0***	**4**	**4**	**0**	**0**	*8*
7:45 AM	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**0**	***0***	**8**	**6**	**0**	**1**	*15*
8:00 AM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**5**	**1**	***6***	**2**	**3**	**0**	**0**	*5*
8:15 AM	**1**	**0**	**2**	**5**	***8***	**0**	**0**	**1**	**0**	***1***	**5**	**10**	**0**	**0**	***15***
8:30 AM	0	0	3	2	*5*	1	0	0	0	*1*	13	7	0	0	*20*
8:45 AM	0	0	2	3	*5*	0	0	1	0	*1*	0	4	0	0	*4*
Count Total	1	0	16	26	*43*	1	0	8	1	*10*	39	40	0	4	*83*
Peak Hour	**1**	**0**	**5**	**13**	***19***	**0**	**0**	**6**	**1**	***7***	**19**	**23**	**0**	**1**	***43***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W 25th St Eastbound				W 25th St Westbound				Pacific Ave Northbound				Pacific Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0	8	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	3	0	0	0	2	0	6	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**0**	**5**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**4**	23
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	17
8:15 AM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**5**	**0**	**8**	**19**
8:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	19
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	20
Count Total	1	0	0	0	0	0	0	0	0	1	15	0	0	0	26	0	43	0
Peak Hour	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**13**	**0**	**19**	**0**

Two-Hour Count Summaries - Bikes

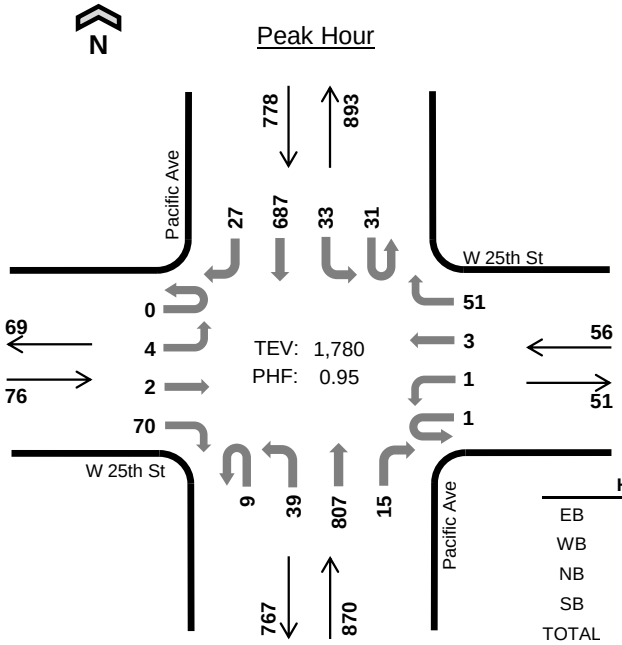
Interval Start	W 25th St Eastbound			W 25th St Westbound			Pacific Ave Northbound			Pacific Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**6**	7
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**7**
8:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	8
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	9
Count Total	1	0	0	0	0	0	0	8	0	0	0	1	10	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**1**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

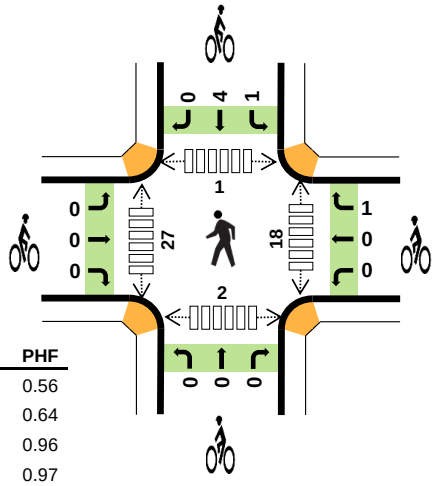
Pacific Ave
W 25th St

Date: 02-16-2022
Count Period: 2:00 PM to 4:00 PM
Peak Hour: 2:45 PM to 3:45 PM

Peak Hour



	HV %:	PHF
EB	0.0%	0.56
WB	0.0%	0.64
NB	1.8%	0.96
SB	1.0%	0.97
TOTAL	1.3%	0.95



Two-Hour Count Summaries

Interval Start		W 25th St Eastbound UT	LT	TH	RT	W 25th St Westbound UT	LT	TH	RT	Pacific Ave Northbound UT	LT	TH	RT	Pacific Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
2:00 PM		0	1	2	10	0	1	0	5	0	7	181	2	3	5	134	2	353	0
2:15 PM		0	1	2	5	0	1	0	12	1	1	177	0	3	2	157	7	369	0
2:30 PM		0	0	1	8	0	0	2	3	0	9	208	3	2	4	161	6	407	0
2:45 PM		**0**	**0**	**0**	**7**	**0**	**1**	**1**	**10**	**1**	**10**	**211**	**4**	**9**	**8**	**176**	**8**	**446**	1,575
3:00 PM		**0**	**2**	**2**	**23**	**1**	**0**	**1**	**4**	**2**	**13**	**201**	**3**	**8**	**9**	**167**	**4**	**440**	1,662
3:15 PM		**0**	**1**	**0**	**33**	**0**	**0**	**0**	**22**	**6**	**11**	**197**	**5**	**7**	**13**	**164**	**8**	**467**	1,760
3:30 PM		**0**	**1**	**0**	**7**	**0**	**0**	**1**	**15**	**0**	**5**	**198**	**3**	**7**	**3**	**180**	**7**	**427**	**1,780**
3:45 PM		0	0	0	7	0	0	3	5	3	4	227	4	3	4	164	9	433	1,767
Count Total		0	6	7	100	1	3	8	76	13	60	1,600	24	42	48	1,303	51	3,342	0
Peak Hour	**All**	**0**	**4**	**2**	**70**	**1**	**1**	**3**	**51**	**9**	**39**	**807**	**15**	**31**	**33**	**687**	**27**	**1,780**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**0**	**0**	**0**	**8**	**0**	**24**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**3%**	**2%**	**0%**	**0%**	**0%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
2:00 PM	0	0	7	2	*9*	0	0	0	0	*0*	2	4	0	0	*6*
2:15 PM	0	0	4	4	*8*	0	0	0	0	*0*	4	4	0	1	*9*
2:30 PM	0	0	3	2	*5*	1	0	0	0	*1*	5	3	0	0	*8*
2:45 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**3**	**4**	**1**	**0**	*8*
3:00 PM	**0**	**0**	**4**	**1**	***5***	**0**	**0**	**0**	**1**	***1***	**2**	**4**	**0**	**0**	*6*
3:15 PM	**0**	**0**	**5**	**2**	***7***	**0**	**0**	**0**	**2**	***2***	**9**	**7**	**0**	**2**	*18*
3:30 PM	**0**	**0**	**6**	**5**	***11***	**0**	**1**	**0**	**2**	***3***	**4**	**12**	**0**	**0**	***16***
3:45 PM	1	0	1	4	*6*	0	0	1	0	*1*	8	7	0	0	*15*
Count Total	1	0	31	20	*52*	1	1	1	5	*8*	37	45	1	3	*86*
Peak Hour	**0**	**0**	**16**	**8**	***24***	**0**	**1**	**0**	**5**	***6***	**18**	**27**	**1**	**2**	***48***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W 25th St				W 25th St				Pacific Ave				Pacific Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	1	6	0	0	0	2	0	9	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	8	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	0
2:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	23
3:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**5**	19
3:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**7**	18
3:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**0**	**5**	**0**	**11**	**24**
3:45 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4	0	6	29
Count Total	0	0	0	1	0	0	0	0	0	2	29	0	0	0	20	0	52	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**0**	**0**	**0**	**8**	**0**	**24**	**0**

Two-Hour Count Summaries - Bikes

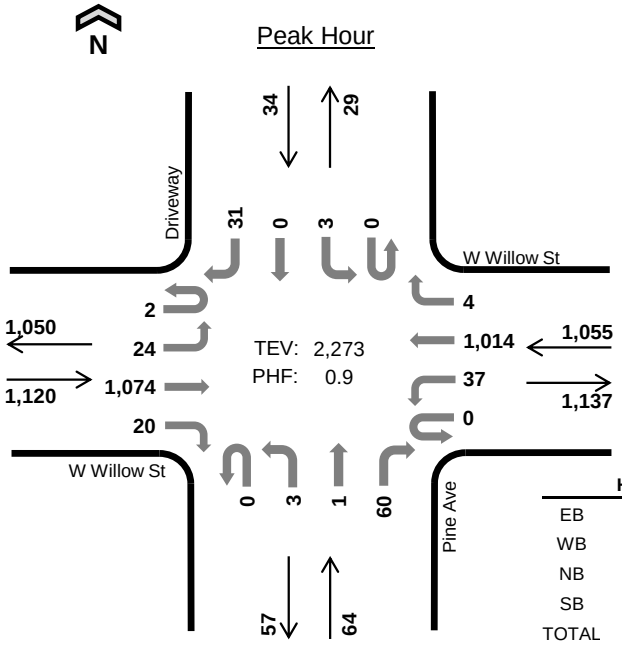
Interval Start	W 25th St			W 25th St			Pacific Ave			Pacific Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0
2:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
3:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	2
3:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	4
3:30 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**3**	**6**
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	7
Count Total	1	0	0	0	0	1	0	1	0	1	4	0	8	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**4**	**0**	**6**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

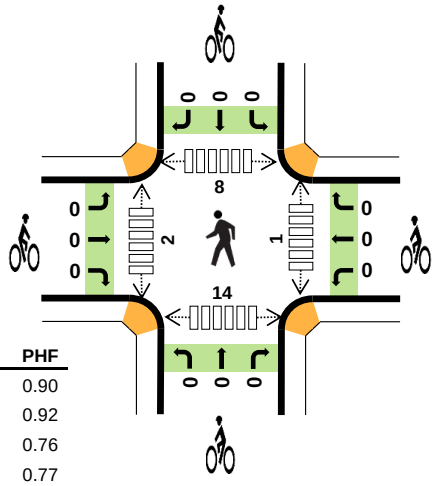
Pine Ave
W Willow St

Date: 02-24-2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour



	HV %:	PHF
EB	2.1%	0.90
WB	2.6%	0.92
NB	1.6%	0.76
SB	0.0%	0.77
TOTAL	2.2%	0.90



Two-Hour Count Summaries

Interval Start		W Willow St Eastbound UT	LT	TH	RT	W Willow St Westbound UT	LT	TH	RT	Pine Ave Northbound UT	LT	TH	RT	Driveway Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	1	184	1	0	9	175	2	0	0	1	5	0	1	0	5	384	0
7:15 AM		1	5	226	2	0	4	236	1	0	0	1	15	0	0	0	4	495	0
7:30 AM		**0**	**8**	**273**	**1**	**0**	**9**	**259**	**0**	**0**	**0**	**0**	**12**	**0**	**1**	**0**	**6**	**569**	0
7:45 AM		**0**	**8**	**291**	**12**	**0**	**13**	**275**	**0**	**0**	**0**	**0**	**21**	**0**	**1**	**0**	**8**	**629**	2,077
8:00 AM		**0**	**3**	**264**	**4**	**0**	**9**	**267**	**3**	**0**	**1**	**1**	**16**	**0**	**1**	**0**	**10**	**579**	2,272
8:15 AM		**2**	**5**	**246**	**3**	**0**	**6**	**213**	**1**	**0**	**2**	**0**	**11**	**0**	**0**	**0**	**7**	**496**	**2,273**
8:30 AM		0	4	244	1	0	1	197	0	0	4	0	13	0	0	3	3	470	2,174
8:45 AM		0	5	288	1	0	5	205	1	0	1	0	10	0	0	0	4	520	2,065
Count Total		3	39	2,016	25	0	56	1,827	8	0	8	3	103	0	4	3	47	4,142	0
Peak Hour	**All**	**2**	**24**	**1,074**	**20**	**0**	**37**	**1,014**	**4**	**0**	**3**	**1**	**60**	**0**	**3**	**0**	**31**	**2,273**	**0**
	HV	**0**	**0**	**22**	**1**	**0**	**0**	**27**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**51**	**0**
	HV%	**0%**	**0%**	**2%**	**5%**	**-**	**0%**	**3%**	**0%**	**-**	**0%**	**0%**	**2%**	**-**	**0%**	**-**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	3	14	0	0	*17*	1	0	0	1	*2*	0	0	2	0	*2*
7:15 AM	5	14	0	0	*19*	0	0	0	0	*0*	0	0	3	2	*5*
7:30 AM	**9**	**6**	**1**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**4**	*6*
7:45 AM	**4**	**7**	**0**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**3**	*5*
8:00 AM	**2**	**6**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**2**	**6**	*10*
8:15 AM	**8**	**8**	**0**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**1**	***4***
8:30 AM	5	4	0	0	*9*	0	0	0	0	*0*	0	0	2	1	*3*
8:45 AM	13	2	0	0	*15*	2	0	0	0	*2*	0	0	3	4	*7*
Count Total	49	61	1	0	*111*	3	0	0	1	*4*	1	2	18	21	*42*
Peak Hour	**23**	**27**	**1**	**0**	***51***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**8**	**14**	***25***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Willow St				W Willow St				Pine Ave				Driveway				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	0	13	1	0	0	0	0	0	0	0	0	17	0
7:15 AM	0	0	5	0	0	0	14	0	0	0	0	0	0	0	0	0	19	0
7:30 AM	**0**	**0**	**9**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**16**	0
7:45 AM	**0**	**0**	**3**	**1**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	63
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	54
8:15 AM	**0**	**0**	**8**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**51**
8:30 AM	0	0	5	0	0	0	4	0	0	0	0	0	0	0	0	0	9	44
8:45 AM	0	0	13	0	0	0	1	1	0	0	0	0	0	0	0	0	15	48
Count Total	0	0	48	1	0	0	59	2	0	0	0	1	0	0	0	0	111	0
Peak Hour	**0**	**0**	**22**	**1**	**0**	**0**	**27**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**51**	**0**

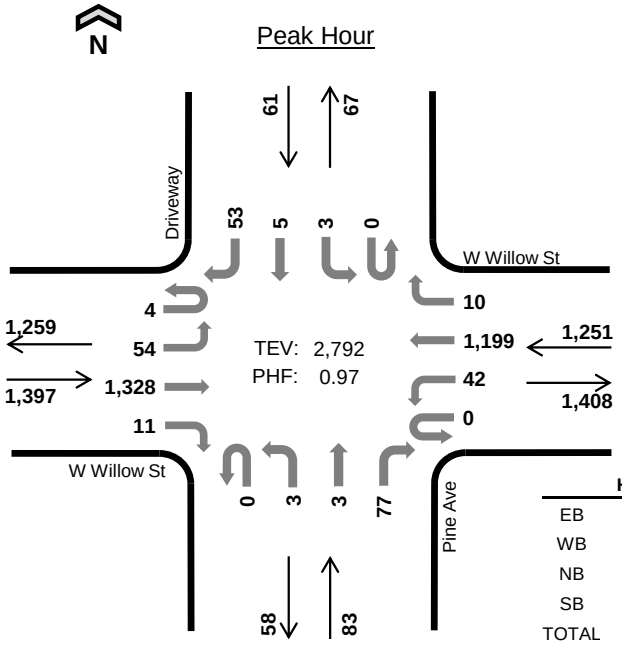
Two-Hour Count Summaries - Bikes

Interval Start	W Willow St			W Willow St			Pine Ave			Driveway			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	1	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	2
Count Total	0	3	0	0	0	0	0	0	0	0	0	1	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

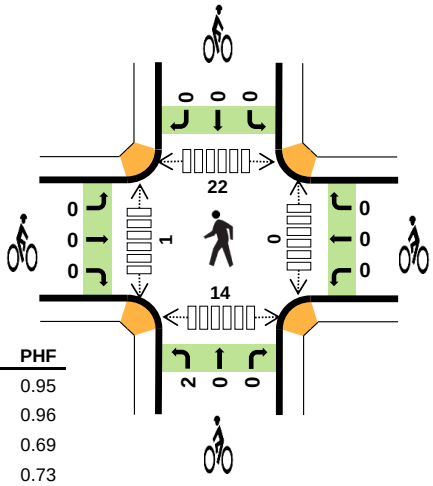
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Pine Ave
W Willow St

Date: 02-24-2022
Count Period: 2:00 PM to 4:00 PM
Peak Hour: 3:00 PM to 4:00 PM



	HV %:	PHF
EB	2.4%	0.95
WB	1.4%	0.96
NB	1.2%	0.69
SB	1.6%	0.73
TOTAL	1.9%	0.97



Two-Hour Count Summaries

Interval Start		W Willow St Eastbound UT	LT	TH	RT	W Willow St Westbound UT	LT	TH	RT	Pine Ave Northbound UT	LT	TH	RT	Driveway Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
2:00 PM		2	12	240	3	0	11	244	3	0	2	1	11	0	0	1	16	546	0
2:15 PM		0	13	266	1	0	3	277	4	0	1	1	7	0	1	1	13	588	0
2:30 PM		0	13	291	2	1	12	279	4	0	0	0	14	0	1	0	12	629	0
2:45 PM		1	6	339	2	0	5	275	2	0	0	1	16	0	2	0	8	657	2,420
3:00 PM		**2**	**10**	**319**	**3**	**0**	**14**	**310**	**2**	**0**	**0**	**2**	**14**	**0**	**0**	**0**	**9**	**685**	2,559
3:15 PM		**0**	**12**	**337**	**4**	**0**	**16**	**272**	**4**	**0**	**0**	**0**	**30**	**0**	**1**	**2**	**15**	**693**	2,664
3:30 PM		**1**	**19**	**346**	**1**	**0**	**7**	**310**	**4**	**0**	**1**	**1**	**16**	**0**	**1**	**0**	**12**	**719**	2,754
3:45 PM		**1**	**13**	**326**	**3**	**0**	**5**	**307**	**0**	**0**	**2**	**0**	**17**	**0**	**1**	**3**	**17**	**695**	**2,792**
Count Total		7	98	2,464	19	1	73	2,274	23	0	6	6	125	0	7	7	102	5,212	0
Peak Hour	**All**	**4**	**54**	**1,328**	**11**	**0**	**42**	**1,199**	**10**	**0**	**3**	**3**	**77**	**0**	**3**	**5**	**53**	**2,792**	**0**
	HV	**0**	**1**	**32**	**0**	**0**	**0**	**17**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**53**	**0**
	HV%	**0%**	**2%**	**2%**	**0%**	**-**	**0%**	**1%**	**10%**	**-**	**0%**	**0%**	**1%**	**-**	**0%**	**0%**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
2:00 PM	8	5	0	0	*13*	0	0	0	0	*0*	0	0	4	2	*6*
2:15 PM	9	7	0	0	*16*	0	0	0	0	*0*	1	0	3	2	*6*
2:30 PM	6	1	0	0	*7*	0	0	0	0	*0*	0	0	4	7	*11*
2:45 PM	7	7	0	0	*14*	0	0	0	0	*0*	0	0	7	3	*10*
3:00 PM	**10**	**7**	**0**	**0**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**8**	**2**	*11*
3:15 PM	**10**	**1**	**1**	**1**	***13***	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**5**	**6**	*11*
3:30 PM	**4**	**9**	**0**	**0**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**5**	**2**	*7*
3:45 PM	**9**	**1**	**0**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**4**	**4**	***8***
Count Total	63	38	1	1	*103*	0	0	2	0	*2*	1	1	40	28	*70*
Peak Hour	**33**	**18**	**1**	**1**	***53***	**0**	**0**	**2**	**0**	***2***	**0**	**1**	**22**	**14**	***37***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Willow St				W Willow St				Pine Ave				Driveway				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	8	0	0	0	5	0	0	0	0	0	0	0	0	0	13	0
2:15 PM	0	0	9	0	0	0	7	0	0	0	0	0	0	0	0	0	16	0
2:30 PM	0	0	6	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0
2:45 PM	0	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	14	50
3:00 PM	**0**	**0**	**10**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**17**	54
3:15 PM	**0**	**0**	**10**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**13**	51
3:30 PM	**0**	**1**	**3**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	57
3:45 PM	**0**	**0**	**9**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**53**
Count Total	0	1	62	0	0	0	36	2	0	0	0	1	0	0	0	1	103	0
Peak Hour	**0**	**1**	**32**	**0**	**0**	**0**	**17**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**53**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W Willow St			W Willow St			Pine Ave			Driveway			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	2
3:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Count Total	0	0	0	0	0	0	2	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

APPENDIX B – LOS CALCULATION SHEETS

Existing LOS Calculation Sheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	986	123	130	897	117	106	572	168	67	331	56
Future Volume (veh/h)	148	986	123	130	897	117	106	572	168	67	331	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	1084	135	143	986	129	116	629	185	74	364	61
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	343	1608	200	315	1556	203	381	1001	294	228	1127	187
Arrive On Green	0.09	0.35	0.35	0.08	0.34	0.34	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	4599	572	1781	4570	597	962	2708	796	671	3050	506
Grp Volume(v), veh/h	163	802	417	143	734	381	116	412	402	74	211	214
Grp Sat Flow(s),veh/h/ln	1781	1702	1767	1781	1702	1763	962	1777	1727	671	1777	1779
Q Serve(g_s), s	3.8	13.3	13.4	3.4	12.1	12.1	6.5	12.7	12.7	6.8	5.6	5.7
Cycle Q Clear(g_c), s	3.8	13.3	13.4	3.4	12.1	12.1	12.3	12.7	12.7	19.5	5.6	5.7
Prop In Lane	1.00		0.32	1.00		0.34	1.00		0.46	1.00		0.28
Lane Grp Cap(c), veh/h	343	1190	618	315	1159	600	381	657	638	228	657	658
V/C Ratio(X)	0.47	0.67	0.67	0.45	0.63	0.63	0.30	0.63	0.63	0.32	0.32	0.33
Avail Cap(c_a), veh/h	550	1663	864	511	1612	835	626	1109	1078	399	1109	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	18.4	18.4	14.0	18.4	18.5	19.4	17.2	17.2	25.2	15.0	15.0
Incr Delay (d2), s/veh	1.0	0.7	1.3	1.0	0.6	1.1	0.4	1.0	1.0	0.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.9	5.2	1.3	4.4	4.7	1.4	4.9	4.8	1.1	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	19.1	19.7	15.0	19.0	19.6	19.9	18.2	18.2	26.0	15.3	15.3
LnGrp LOS	B	B	B	B	B	B	B	B	B	C	B	B
Approach Vol, veh/h		1382			1258			930			499	
Approach Delay, s/veh		18.7			18.7			18.4			16.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.1	9.7	27.8		29.1	10.3	27.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		41.5	12.5	32.5		41.5	13.5	31.5
Max Q Clear Time (g_c+I1), s		14.7	5.4	15.4		21.5	5.8	14.1
Green Ext Time (p_c), s		6.5	0.2	7.9		3.1	0.2	7.2

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	32	4	0	40	24	807	8	31	507	33
Future Vol, veh/h	10	0	32	4	0	40	24	807	8	31	507	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	35	4	0	43	26	877	9	34	551	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1128	1575	294	1278	1589	443	587	0	0	886	0	0
Stage 1	637	637	-	934	934	-	-	-	-	-	-	-
Stage 2	491	938	-	344	655	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	159	109	702	123	107	562	984	-	-	760	-	-
Stage 1	432	470	-	286	343	-	-	-	-	-	-	-
Stage 2	528	341	-	645	461	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	139	101	702	111	100	562	984	-	-	760	-	-
Mov Cap-2 Maneuver	139	101	-	111	100	-	-	-	-	-	-	-
Stage 1	421	449	-	279	334	-	-	-	-	-	-	-
Stage 2	474	332	-	586	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.6	14.9	0.3	0.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	984	-	-	357	410	760	-	-
HCM Lane V/C Ratio	0.027	-	-	0.128	0.117	0.044	-	-
HCM Control Delay (s)	8.8	-	-	16.6	14.9	10	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	1074	20	37	1014	4	3	1	60	3	0	31
Future Vol, veh/h	26	1074	20	37	1014	4	3	1	60	3	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	70	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	1193	22	41	1127	4	3	1	67	3	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1131	0	0	1215	0	0	1795	2475	608	1747	2484	566
Stage 1	-	-	-	-	-	-	1262	1262	-	1211	1211	-
Stage 2	-	-	-	-	-	-	533	1213	-	536	1273	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	338	-	-	308	-	-	85	29	376	91	29	400
Stage 1	-	-	-	-	-	-	130	239	-	142	253	-
Stage 2	-	-	-	-	-	-	455	253	-	453	237	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	338	-	-	308	-	-	65	23	376	61	23	400
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	23	-	61	23	-
Stage 1	-	-	-	-	-	-	119	218	-	130	219	-
Stage 2	-	-	-	-	-	-	360	219	-	339	217	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	24.3	20.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	257	338	-	-	308	-	-	268
HCM Lane V/C Ratio	0.277	0.085	-	-	0.133	-	-	0.141
HCM Control Delay (s)	24.3	16.6	-	-	18.5	-	-	20.6
HCM Lane LOS	C	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	1.1	0.3	-	-	0.5	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1137	164	171	958	107	127	546	203	90	413	80
Future Volume (veh/h)	159	1137	164	171	958	107	127	546	203	90	413	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	1160	167	174	978	109	130	557	207	92	421	82
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	1600	230	309	1676	186	339	948	351	236	1110	214
Arrive On Green	0.08	0.35	0.35	0.09	0.36	0.36	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	4509	649	1781	4663	518	896	2538	940	703	2970	574
Grp Volume(v), veh/h	162	876	451	174	713	374	130	390	374	92	251	252
Grp Sat Flow(s),veh/h/ln	1781	1702	1754	1781	1702	1777	896	1777	1701	703	1777	1767
Q Serve(g_s), s	4.1	16.4	16.4	4.4	12.5	12.5	9.1	12.9	13.0	8.9	7.6	7.7
Cycle Q Clear(g_c), s	4.1	16.4	16.4	4.4	12.5	12.5	16.8	12.9	13.0	21.9	7.6	7.7
Prop In Lane	1.00		0.37	1.00		0.29	1.00		0.55	1.00		0.32
Lane Grp Cap(c), veh/h	344	1208	622	309	1224	639	339	664	636	236	664	660
V/C Ratio(X)	0.47	0.72	0.73	0.56	0.58	0.58	0.38	0.59	0.59	0.39	0.38	0.38
Avail Cap(c_a), veh/h	516	1504	775	455	1472	768	510	1002	960	370	1002	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	20.6	20.6	15.8	19.1	19.1	23.0	18.5	18.5	27.3	16.8	16.8
Incr Delay (d2), s/veh	1.0	1.3	2.6	1.6	0.4	0.9	0.7	0.8	0.9	1.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.3	6.7	1.8	4.7	5.0	1.9	5.1	4.9	1.5	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	22.0	23.2	17.4	19.5	20.0	23.7	19.3	19.4	28.3	17.2	17.2
LnGrp LOS	B	C	C	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		1489			1261			894			595	
Approach Delay, s/veh		21.6			19.4			20.0			18.9	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	11.0	30.6		32.0	10.6	30.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		41.5	12.5	32.5		41.5	13.2	31.8				
Max Q Clear Time (g_c+I1), s		18.8	6.4	18.4		23.9	6.1	14.5				
Green Ext Time (p_c), s		6.0	0.2	7.7		3.6	0.2	7.0				

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	2	70	2	3	51	48	807	15	64	687	27
Future Vol, veh/h	4	2	70	2	3	51	48	807	15	64	687	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	2	74	2	3	54	51	849	16	67	723	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1399	1838	376	1456	1844	433	751	0	0	865	0	0
Stage 1	871	871	-	959	959	-	-	-	-	-	-	-
Stage 2	528	967	-	497	885	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	100	75	622	91	74	571	854	-	-	774	-	-
Stage 1	312	367	-	276	334	-	-	-	-	-	-	-
Stage 2	502	331	-	523	361	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	64	622	70	63	571	854	-	-	774	-	-
Mov Cap-2 Maneuver	78	64	-	70	63	-	-	-	-	-	-	-
Stage 1	293	335	-	259	314	-	-	-	-	-	-	-
Stage 2	423	311	-	418	330	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.6	17.9	0.5	0.8
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	854	-	-	390	338	774	-	-
HCM Lane V/C Ratio	0.059	-	-	0.205	0.174	0.087	-	-
HCM Control Delay (s)	9.5	-	-	16.6	17.9	10.1	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.8	0.6	0.3	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	1328	11	42	1199	10	3	3	77	3	5	53
Future Vol, veh/h	58	1328	11	42	1199	10	3	3	77	3	5	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	70	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	1369	11	43	1236	10	3	3	79	3	5	55

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1246	0	0	1380	0	0	2078	2827	690	1996	2827	623
Stage 1	-	-	-	-	-	-	1495	1495	-	1327	1327	-
Stage 2	-	-	-	-	-	-	583	1332	-	669	1500	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	297	-	-	255	-	-	57	17	332	64	17	368
Stage 1	-	-	-	-	-	-	89	185	-	117	223	-
Stage 2	-	-	-	-	-	-	424	222	-	376	184	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	297	-	-	255	-	-	23	11	332	29	11	368
Mov Cap-2 Maneuver	-	-	-	-	-	-	23	11	-	29	11	-
Stage 1	-	-	-	-	-	-	71	148	-	93	185	-
Stage 2	-	-	-	-	-	-	292	184	-	224	147	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.7	73.5	115.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	131	297	-	-	255	-	-	87
HCM Lane V/C Ratio	0.653	0.201	-	-	0.17	-	-	0.723
HCM Control Delay (s)	73.5	20.2	-	-	22	-	-	115.7
HCM Lane LOS	F	C	-	-	C	-	-	F
HCM 95th %tile Q(veh)	3.5	0.7	-	-	0.6	-	-	3.6

Opening Year 2027 Without Project LOS Calculation Sheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	1036	129	137	943	123	111	601	177	70	348	59
Future Volume (veh/h)	156	1036	129	137	943	123	111	601	177	70	348	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	171	1138	142	151	1036	135	122	660	195	77	382	64
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	327	1617	202	299	1569	204	377	1036	306	218	1168	194
Arrive On Green	0.09	0.35	0.35	0.08	0.34	0.34	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	4598	573	1781	4572	595	944	2705	799	646	3049	507
Grp Volume(v), veh/h	171	842	438	151	771	400	122	433	422	77	221	225
Grp Sat Flow(s),veh/h/ln	1781	1702	1767	1781	1702	1763	944	1777	1727	646	1777	1779
Q Serve(g_s), s	4.4	15.4	15.4	3.9	13.9	14.0	7.6	14.4	14.4	8.0	6.3	6.5
Cycle Q Clear(g_c), s	4.4	15.4	15.4	3.9	13.9	14.0	14.0	14.4	14.4	22.4	6.3	6.5
Prop In Lane	1.00		0.32	1.00		0.34	1.00		0.46	1.00		0.28
Lane Grp Cap(c), veh/h	327	1197	622	299	1168	605	377	681	662	218	681	682
V/C Ratio(X)	0.52	0.70	0.70	0.50	0.66	0.66	0.32	0.64	0.64	0.35	0.32	0.33
Avail Cap(c_a), veh/h	405	1576	818	369	1529	792	596	1093	1062	368	1093	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	20.2	20.2	15.6	20.2	20.2	20.7	18.2	18.2	27.4	15.7	15.8
Incr Delay (d2), s/veh	1.3	1.0	1.8	1.3	0.7	1.3	0.5	1.0	1.0	1.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	5.8	6.2	1.5	5.2	5.6	1.6	5.6	5.5	1.2	2.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	21.2	22.0	16.9	20.8	21.5	21.2	19.2	19.2	28.3	16.0	16.0
LnGrp LOS	B	C	C	B	C	C	C	B	B	C	B	B
Approach Vol, veh/h		1451			1322			977			523	
Approach Delay, s/veh		20.9			20.6			19.5			17.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.2	10.2	30.0		32.2	10.8	29.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		44.5	8.5	33.5		44.5	9.5	32.5
Max Q Clear Time (g_c+I1), s		16.4	5.9	17.4		24.4	6.4	16.0
Green Ext Time (p_c), s		7.1	0.1	8.0		3.3	0.1	7.4

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	34	4	0	42	25	848	8	33	533	35
Future Vol, veh/h	11	0	34	4	0	42	25	848	8	33	533	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	37	4	0	46	27	922	9	36	579	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1185	1655	309	1343	1670	466	617	0	0	931	0	0
Stage 1	670	670	-	981	981	-	-	-	-	-	-	-
Stage 2	515	985	-	362	689	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	144	97	687	110	95	543	959	-	-	731	-	-
Stage 1	413	454	-	268	326	-	-	-	-	-	-	-
Stage 2	511	324	-	629	445	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	124	90	687	98	88	543	959	-	-	731	-	-
Mov Cap-2 Maneuver	124	90	-	98	88	-	-	-	-	-	-	-
Stage 1	401	432	-	260	317	-	-	-	-	-	-	-
Stage 2	455	315	-	566	423	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18	15.6	0.3	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	959	-	-	326	389	731	-	-
HCM Lane V/C Ratio	0.028	-	-	0.15	0.129	0.049	-	-
HCM Control Delay (s)	8.9	-	-	18	15.6	10.2	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	1129	21	39	1066	4	3	1	63	3	0	33
Future Vol, veh/h	27	1129	21	39	1066	4	3	1	63	3	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	70	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	1254	23	43	1184	4	3	1	70	3	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1188	0	0	1277	0	0	1886	2600	639	1834	2609	594
Stage 1	-	-	-	-	-	-	1326	1326	-	1272	1272	-
Stage 2	-	-	-	-	-	-	560	1274	-	562	1337	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	317	-	-	287	-	-	75	24	359	80	24	384
Stage 1	-	-	-	-	-	-	118	223	-	128	237	-
Stage 2	-	-	-	-	-	-	438	236	-	437	220	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	317	-	-	287	-	-	56	18	359	51	18	384
Mov Cap-2 Maneuver	-	-	-	-	-	-	56	18	-	51	18	-
Stage 1	-	-	-	-	-	-	107	202	-	116	201	-
Stage 2	-	-	-	-	-	-	337	201	-	317	199	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.7	27.3	22.2
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	235	317	-	-	287	-	-	249
HCM Lane V/C Ratio	0.317	0.095	-	-	0.151	-	-	0.161
HCM Control Delay (s)	27.3	17.5	-	-	19.8	-	-	22.2
HCM Lane LOS	D	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	1.3	0.3	-	-	0.5	-	-	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1195	172	180	1007	112	133	574	213	95	434	84
Future Volume (veh/h)	167	1195	172	180	1007	112	133	574	213	95	434	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	1219	176	184	1028	114	136	586	217	97	443	86
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	1590	229	296	1670	185	334	982	363	228	1149	222
Arrive On Green	0.09	0.35	0.35	0.09	0.36	0.36	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1781	4507	651	1781	4665	516	874	2540	939	678	2971	573
Grp Volume(v), veh/h	170	921	474	184	750	392	136	410	393	97	264	265
Grp Sat Flow(s),veh/h/ln	1781	1702	1753	1781	1702	1777	874	1777	1701	678	1777	1767
Q Serve(g_s), s	4.7	19.1	19.1	5.1	14.4	14.4	10.6	14.6	14.6	10.6	8.5	8.6
Cycle Q Clear(g_c), s	4.7	19.1	19.1	5.1	14.4	14.4	19.2	14.6	14.6	25.2	8.5	8.6
Prop In Lane	1.00		0.37	1.00		0.29	1.00		0.55	1.00		0.32
Lane Grp Cap(c), veh/h	329	1201	618	296	1219	636	334	687	658	228	687	684
V/C Ratio(X)	0.52	0.77	0.77	0.62	0.62	0.62	0.41	0.60	0.60	0.43	0.38	0.39
Avail Cap(c_a), veh/h	473	1393	717	415	1363	711	453	928	889	320	928	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	22.8	22.8	17.6	21.0	21.0	24.5	19.4	19.4	29.5	17.5	17.6
Incr Delay (d2), s/veh	1.3	2.3	4.3	2.1	0.7	1.3	0.8	0.8	0.9	1.3	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	7.6	8.2	2.1	5.5	5.9	2.2	5.8	5.6	1.7	3.4	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	25.1	27.1	19.8	21.7	22.4	25.3	20.2	20.3	30.7	17.9	17.9
LnGrp LOS	B	C	C	B	C	C	C	C	C	C	B	B
Approach Vol, veh/h		1565			1326			939			626	
Approach Delay, s/veh		24.8			21.6			21.0			19.9	
Approach LOS		C			C			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.2	11.7	32.5		35.2	11.3	32.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		41.5	12.5	32.5		41.5	13.2	31.8				
Max Q Clear Time (g_c+I1), s		21.2	7.1	21.1		27.2	6.7	16.4				
Green Ext Time (p_c), s		6.2	0.2	7.0		3.5	0.2	6.9				

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	2	74	2	3	54	50	848	16	67	722	28
Future Vol, veh/h	4	2	74	2	3	54	50	848	16	67	722	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	2	78	2	3	57	53	893	17	71	760	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1471	1933	395	1531	1939	455	789	0	0	910	0	0
Stage 1	917	917	-	1008	1008	-	-	-	-	-	-	-
Stage 2	554	1016	-	523	931	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	89	65	604	80	65	552	827	-	-	744	-	-
Stage 1	293	349	-	258	316	-	-	-	-	-	-	-
Stage 2	484	314	-	505	344	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	67	55	604	60	55	552	827	-	-	744	-	-
Mov Cap-2 Maneuver	67	55	-	60	55	-	-	-	-	-	-	-
Stage 1	274	316	-	241	296	-	-	-	-	-	-	-
Stage 2	402	294	-	395	311	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.8	19	0.5	0.8
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	827	-	-	366	318	744	-	-
HCM Lane V/C Ratio	0.064	-	-	0.23	0.195	0.095	-	-
HCM Control Delay (s)	9.6	-	-	17.8	19	10.3	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.7	0.3	-	-

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	1396	12	44	1260	11	3	3	81	3	5	56
Future Vol, veh/h	61	1396	12	44	1260	11	3	3	81	3	5	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	70	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	1439	12	45	1299	11	3	3	84	3	5	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1310	0	0	1451	0	0	2183	2971	726	2098	2972	655
Stage 1	-	-	-	-	-	-	1571	1571	-	1395	1395	-
Stage 2	-	-	-	-	-	-	612	1400	-	703	1577	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	277	-	-	236	-	-	49	14	315	55	14	350
Stage 1	-	-	-	-	-	-	79	169	-	105	207	-
Stage 2	-	-	-	-	-	-	407	205	-	359	168	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	277	-	-	236	-	-	16	9	315	21	9	350
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	9	-	21	9	-
Stage 1	-	-	-	-	-	-	61	131	-	81	167	-
Stage 2	-	-	-	-	-	-	267	166	-	199	130	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.8	108.9	166.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	112	277	-	-	236	-	-	75
HCM Lane V/C Ratio	0.801	0.227	-	-	0.192	-	-	0.88
HCM Control Delay (s)	108.9	21.8	-	-	23.8	-	-	166.4
HCM Lane LOS	F	C	-	-	C	-	-	F
HCM 95th %tile Q(veh)	4.6	0.9	-	-	0.7	-	-	4.4

Opening Year 2027 With Project LOS Calculation Sheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	1045	129	144	943	123	126	609	197	83	348	59
Future Volume (veh/h)	156	1045	129	144	943	123	126	609	197	83	348	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	171	1148	142	158	1036	135	138	669	216	91	382	64
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	1573	194	289	1537	200	393	1068	345	219	1233	205
Arrive On Green	0.09	0.34	0.34	0.08	0.34	0.34	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	4603	569	1781	4572	595	944	2641	852	628	3049	507
Grp Volume(v), veh/h	171	849	441	158	771	400	138	450	435	91	221	225
Grp Sat Flow(s),veh/h/ln	1781	1702	1768	1781	1702	1763	944	1777	1717	628	1777	1779
Q Serve(g_s), s	4.8	17.0	17.1	4.4	15.1	15.2	9.1	15.7	15.8	10.5	6.6	6.7
Cycle Q Clear(g_c), s	4.8	17.0	17.1	4.4	15.1	15.2	15.8	15.7	15.8	26.3	6.6	6.7
Prop In Lane	1.00		0.32	1.00		0.34	1.00		0.50	1.00		0.28
Lane Grp Cap(c), veh/h	314	1163	604	289	1144	593	393	718	694	219	718	719
V/C Ratio(X)	0.54	0.73	0.73	0.55	0.67	0.68	0.35	0.63	0.63	0.42	0.31	0.31
Avail Cap(c_a), veh/h	377	1464	760	339	1420	736	550	1015	981	324	1015	1016
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	22.5	22.5	17.3	22.2	22.2	21.2	18.5	18.5	29.0	15.8	15.8
Incr Delay (d2), s/veh	1.5	1.4	2.7	1.6	0.9	1.8	0.5	0.9	0.9	1.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.6	7.1	1.8	5.9	6.2	2.0	6.2	6.0	1.6	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	23.9	25.2	19.0	23.1	24.0	21.7	19.4	19.5	30.3	16.0	16.1
LnGrp LOS	B	C	C	B	C	C	C	B	B	C	B	B
Approach Vol, veh/h		1461			1329			1023			537	
Approach Delay, s/veh		23.6			22.9			19.7			18.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		36.0	10.8	31.1		36.0	11.2	30.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		44.5	8.5	33.5		44.5	9.5	32.5				
Max Q Clear Time (g_c+I1), s		17.8	6.4	19.1		28.3	6.8	17.2				
Green Ext Time (p_c), s		7.4	0.1	7.6		3.2	0.1	7.1				

Intersection Summary	
HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	34	4	0	42	25	863	8	33	543	35
Future Vol, veh/h	11	0	34	4	0	42	25	863	8	33	543	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	37	4	0	46	27	938	9	36	590	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1204	1682	314	1364	1697	474	628	0	0	947	0	0
Stage 1	681	681	-	997	997	-	-	-	-	-	-	-
Stage 2	523	1001	-	367	700	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	140	94	682	106	92	537	950	-	-	721	-	-
Stage 1	407	448	-	262	320	-	-	-	-	-	-	-
Stage 2	505	319	-	625	440	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	121	87	682	94	85	537	950	-	-	721	-	-
Mov Cap-2 Maneuver	121	87	-	94	85	-	-	-	-	-	-	-
Stage 1	396	426	-	255	311	-	-	-	-	-	-	-
Stage 2	449	310	-	562	418	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.3	15.9	0.2	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	950	-	-	320	381	721	-	-
HCM Lane V/C Ratio	0.029	-	-	0.153	0.131	0.05	-	-
HCM Control Delay (s)	8.9	-	-	18.3	15.9	10.3	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	1133	21	39	1073	4	3	1	63	3	0	33
Future Vol, veh/h	27	1133	21	39	1073	4	3	1	63	3	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	70	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	1259	23	43	1192	4	3	1	70	3	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1196	0	0	1282	0	0	1894	2613	641	1844	2622	598
Stage 1	-	-	-	-	-	-	1331	1331	-	1280	1280	-
Stage 2	-	-	-	-	-	-	563	1282	-	564	1342	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	314	-	-	285	-	-	74	24	358	79	24	382
Stage 1	-	-	-	-	-	-	117	222	-	127	235	-
Stage 2	-	-	-	-	-	-	436	234	-	436	219	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	314	-	-	285	-	-	55	18	358	50	18	382
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	18	-	50	18	-
Stage 1	-	-	-	-	-	-	106	201	-	115	200	-
Stage 2	-	-	-	-	-	-	335	199	-	315	198	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.7	27.4	22.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	234	314	-	-	285	-	-	246
HCM Lane V/C Ratio	0.318	0.096	-	-	0.152	-	-	0.163
HCM Control Delay (s)	27.4	17.7	-	-	19.9	-	-	22.5
HCM Lane LOS	D	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	1.3	0.3	-	-	0.5	-	-	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1200	172	184	1007	112	151	584	226	102	434	84
Future Volume (veh/h)	167	1200	172	184	1007	112	151	584	226	102	434	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	1224	176	188	1028	114	154	596	231	104	443	86
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	1561	224	290	1647	182	343	998	386	226	1184	228
Arrive On Green	0.09	0.35	0.35	0.09	0.35	0.35	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	4509	648	1781	4665	516	874	2504	969	663	2971	573
Grp Volume(v), veh/h	170	924	476	188	750	392	154	423	404	104	264	265
Grp Sat Flow(s),veh/h/ln	1781	1702	1754	1781	1702	1777	874	1777	1696	663	1777	1767
Q Serve(g_s), s	5.0	20.1	20.1	5.5	15.1	15.2	12.5	15.5	15.6	12.2	8.7	8.8
Cycle Q Clear(g_c), s	5.0	20.1	20.1	5.5	15.1	15.2	21.3	15.5	15.6	27.7	8.7	8.8
Prop In Lane	1.00		0.37	1.00		0.29	1.00		0.57	1.00		0.32
Lane Grp Cap(c), veh/h	322	1179	607	290	1202	627	343	708	676	226	708	704
V/C Ratio(X)	0.53	0.78	0.78	0.65	0.62	0.63	0.45	0.60	0.60	0.46	0.37	0.38
Avail Cap(c_a), veh/h	455	1338	689	396	1309	684	433	892	851	295	892	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	24.2	24.2	18.7	22.2	22.2	25.1	19.6	19.6	30.6	17.6	17.6
Incr Delay (d2), s/veh	1.3	2.8	5.3	2.4	0.8	1.6	0.9	0.8	0.9	1.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	8.1	8.8	2.3	5.9	6.3	2.6	6.2	6.0	2.0	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	27.0	29.5	21.1	23.0	23.8	26.0	20.4	20.5	32.0	17.9	17.9
LnGrp LOS	B	C	C	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		1570			1330			981			633	
Approach Delay, s/veh		26.8			23.0			21.3			20.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		37.5	12.1	33.1		37.5	11.5	33.7
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		41.5	12.5	32.5		41.5	13.2	31.8
Max Q Clear Time (g_c+I1), s		23.3	7.5	22.1		29.7	7.0	17.2
Green Ext Time (p_c), s		6.2	0.2	6.5		3.2	0.2	6.7

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	2	74	2	3	54	50	856	16	67	734	28
Future Vol, veh/h	4	2	74	2	3	54	50	856	16	67	734	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	2	78	2	3	57	53	901	17	71	773	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1488	1954	401	1546	1960	459	802	0	0	918	0	0
Stage 1	930	930	-	1016	1016	-	-	-	-	-	-	-
Stage 2	558	1024	-	530	944	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	86	63	599	78	63	549	817	-	-	739	-	-
Stage 1	287	344	-	255	314	-	-	-	-	-	-	-
Stage 2	482	311	-	500	339	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	53	599	58	53	549	817	-	-	739	-	-
Mov Cap-2 Maneuver	65	53	-	58	53	-	-	-	-	-	-	-
Stage 1	268	311	-	238	294	-	-	-	-	-	-	-
Stage 2	400	291	-	391	306	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.1	19.4	0.5	0.8
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	817	-	-	359	311	739	-	-
HCM Lane V/C Ratio	0.064	-	-	0.235	0.2	0.095	-	-
HCM Control Delay (s)	9.7	-	-	18.1	19.4	10.4	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.7	0.3	-	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	1401	12	44	1264	11	3	3	81	3	5	56
Future Vol, veh/h	61	1401	12	44	1264	11	3	3	81	3	5	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	70	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	1444	12	45	1303	11	3	3	84	3	5	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1314	0	0	1456	0	0	2190	2980	728	2104	2981	657
Stage 1	-	-	-	-	-	-	1576	1576	-	1399	1399	-
Stage 2	-	-	-	-	-	-	614	1404	-	705	1582	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	275	-	-	234	-	-	48	14	314	55	14	349
Stage 1	-	-	-	-	-	-	78	168	-	104	206	-
Stage 2	-	-	-	-	-	-	406	204	-	358	167	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	275	-	-	234	-	-	16	9	314	21	9	349
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	9	-	21	9	-
Stage 1	-	-	-	-	-	-	60	130	-	80	166	-
Stage 2	-	-	-	-	-	-	265	165	-	198	129	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.8	108.9	166.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	112	275	-	-	234	-	-	75
HCM Lane V/C Ratio	0.801	0.229	-	-	0.194	-	-	0.88
HCM Control Delay (s)	108.9	21.9	-	-	24	-	-	166.4
HCM Lane LOS	F	C	-	-	C	-	-	F
HCM 95th %tile Q(veh)	4.6	0.9	-	-	0.7	-	-	4.4

APPENDIX C – OPENING YEAR 2027 TRAFFIC VOLUMES

Opening Year 2027 Without Project AM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Pacific Ave/Willow St	111	601	177	70	348	59	156	1,036	129	137	943	123
2	Pacific Ave/25th St	25	848	8	33	533	35	11	0	34	4	0	42
3	Pine/Willow St	3	1	63	3	0	33	27	1,129	21	39	1,066	4

Opening Year 2027 Without Project PM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Pacific Ave/Willow St	133	574	213	95	434	84	167	1,195	172	180	1,007	112
2	Pacific Ave/25th St	50	848	16	67	722	28	4	2	74	2	3	54
3	Pine/Willow St	3	3	81	3	5	56	61	1,396	12	44	1,260	11

Opening Year 2027 With Project AM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Pacific Ave/Willow St	126	609	197	83	348	59	156	1,045	129	144	943	123
2	Pacific Ave/25th St	25	863	8	33	543	35	11	0	34	4	0	42
3	Pine/Willow St	3	1	63	3	0	33	27	1,133	21	39	1,073	4

Opening Year 2027 With Project PM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Pacific Ave/Willow St	151	584	226	102	434	84	167	1,200	172	184	1,007	112
2	Pacific Ave/25th St	50	856	16	67	734	28	4	2	74	2	3	54
3	Pine/Willow St	3	3	81	3	5	56	61	1,401	12	44	1,264	11