COUNTY OF LOS ANGELES
CALIFORNIA ENVIRONMENTAL QUALITY ACT
MITIGATED NEGATIVE DECLARATION

PROJECT TITLE: Charles R. Drew University of Medicine and Science Health Professions Education Building

LOCATION AND BRIEF DESCRIPTION OF PROJECT: The project site is located at the southwesterly end of the Charles R. Drew University campus at 1731 East 120th Street in the unincorporated Willowbrook community of Los Angeles County. (APN 6149-028-919). The project site is an irregularly shaped 46,650-square foot parcel and currently has two one-story modular buildings that are used for offices, maintenance, facilities support, security, and other administration support for the university. One of the modular buildings is 4,400 square feet, and the second modular building is 5,228 square feet.

The proposed project involves demolishing the existing two modular buildings, removing the existing landscaping, and the construction of a five-story, 92,618-square-foot Health Professions Education Building (HPEB) on the project site. Approximately three feet of fill material would be replaced on-site. The proposed building would have a maximum height of 75 feet and a floor area ratio (FAR) of 2.15. The existing uses in the two modular buildings would be moved into other buildings on the CDU campus. The proposed building would be "L"-shaped and would have a landscaped student-oriented central courtyard, which would link to the proposed building to the existing CDU campus, specifically the CDU Student Center and Keck Building College of Science and Health. The proposed building would have classrooms, a lecture hall, auditorium/meeting room, a café, facilities support space (e.g., shipping/receiving, janitorial, electrical, and data rooms), study rooms, staff and faculty offices, conference rooms, virtual anatomy and virtual skills rooms, simulation rooms (e.g., hospital and exam room simulation), student lounge, lockers rooms, showers, restrooms/changing rooms, and outdoor terraces. Outdoor terraces are proposed on the 5th floor at the north and east sides of the building.

A total of 73 existing and proposed parking spaces would be allocated to the proposed project. The existing surface parking lot at the northeast corner of Compton Avenue and 118th Street, which has 85 spaces, would have 65 spaces allocated to the proposed project. The proposed project does not propose any changes to this parking lot. As part of the proposed project, the parking facility on the 118th Street (between the former Abraham Lincoln Elementary School and the Park Water Company Well 19C property) would be expanded. The existing three-level parking structure at the northern part of this parking facility would extend south over the existing surface parking lot. The proposed parking structure would connect to the existing three-level parking structure. The proposed parking structure would provide an additional 8 parking spaces that would support the additional square footage associated with the proposed building.

MITIGATION MEASURES INCLUDED IN THE PROJECT TO AVOID POTENTIALLY SIGNIFICANT EFFECTS: Mitigation measure is identified for Hydrology & Water Quality and Hazards & Hazardous Materials; see attached Initial Study.

FINDING OF NO SIGNIFICANT EFFECT: Based on the attached Initial Study it has been determined that the proposed project will not have a significant effect on the environment.

Any written objections together with responses of the Lead Agency to be attached prior to adoption.

CONTACT: Bryan Moller, Regional Planner
County of Los Angeles
Department of Regional Planning
320 W. Temple Street
Los Angeles, CA 90012
(213) 974-6411
bmoller@planning.lacounty.gov

CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE HEALTH PROFESSIONS EDUCATION BUILDING

INITIAL STUDY

Lead Agency:

COUNTY OF LOS ANGELES
DEPARTMENT OF REGIONAL PLANNING
320 West Temple Street
Los Angeles, CA 90012
(213) 974-6411

Consultant:

TERRY A. HAYES ASSOCIATES INC.
3535 Hayden Avenue, Suite 350
Culver City, CA 90232

October 2022

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Environmental Checklist Form (Initial Study)

County of Los Angeles, Department of Regional Planning

Project title: Charles R. Drew University of Medicine and Science Health Professions Education Building.

Lead agency name and address: Los Angeles County, 320 West Temple Street, Los Angeles, CA 90012

Contact Person and phone number: Edward Rojas, (213) 974-6411

Project sponsor's name and address: Charles R. Drew University, 1731 East 120th Street, Los Angeles, CA 90059

Project location: 1731 East 120th Street, Los Angeles, CA 90059
APN: 6149-028-919 *USGS Quad*: South Gate

Gross Acreage: 1.07 acre

General plan designation: SP (Willowbrook Transit Oriented District Specific Plan)

Community/Area-wide Plan designation: Drew Education Specific Plan Zone

Zoning: Specific Plan (SP)

Description of project: The project site is located at the southwest corner of the Charles R. Drew University of Medicine and Science (CDU) campus at 1731 East 120th Street in the unincorporated Willowbrook community of Los Angeles County (County) (**Figure 1**). The project site is an irregularly shaped 46,650-square foot parcel that is currently being leased from the County of Los Angeles. The project site is relatively flat and currently has two one-story modular buildings that are used for offices, maintenance, facilities support, security, and other administration support for the university. One of the modular buildings is 4,400 square feet, and the second modular building is 5,228 square feet. An access road is located on the westerly portion of the project site and is shared between CDU, the adjacent King Drew Magnet High School of Medicine and Science to the west of the project site, and the multi-family housing complex to the north of the project site. The access road provides fire department access from 120th Street to the multi-family housing complex and provides auxiliary access to the high school, which includes access to the school's mechanical equipment enclosure and a few accessory parking spaces. The project site is landscaped along the easterly and southernly boundary and has one driveway entrance along 120th Street. A signalized pedestrian crosswalk is located to the east of the project site at 120th Street and Healthy Way.

The proposed project involves demolishing the existing two modular buildings, removing the existing landscaping, and the construction of a five-story, 92,618-square-foot Health Professions Education Building (HPEB) on the project site. Approximately three feet of fill material would be replaced on-site. The proposed building would have a maximum height of 75 feet and a floor area ratio (FAR) of 2.15. The existing uses in the two modular buildings would be moved into other buildings on the CDU campus. The proposed building would be "L"-shaped and would have a landscaped student-oriented central courtyard, which would link to the proposed building to the existing CDU campus, specifically the CDU Student Center and Keck Building College of Science and Health. The proposed building would have classrooms, a lecture hall, auditorium/meeting room, a café, facilities support space (e.g., shipping/receiving, janitorial, electrical, and data rooms), study rooms, staff and faculty offices, conference rooms, virtual anatomy and virtual skills rooms, simulation rooms (e.g., hospital and exam room simulation), student lounge, lockers rooms, showers, restrooms/changing rooms, and outdoor terraces. Outdoor terraces are proposed on the 5th floor at the north and east sides of the building. The proposed site plan is shown in **Figure 2**.

Source: TAHA, 2021.

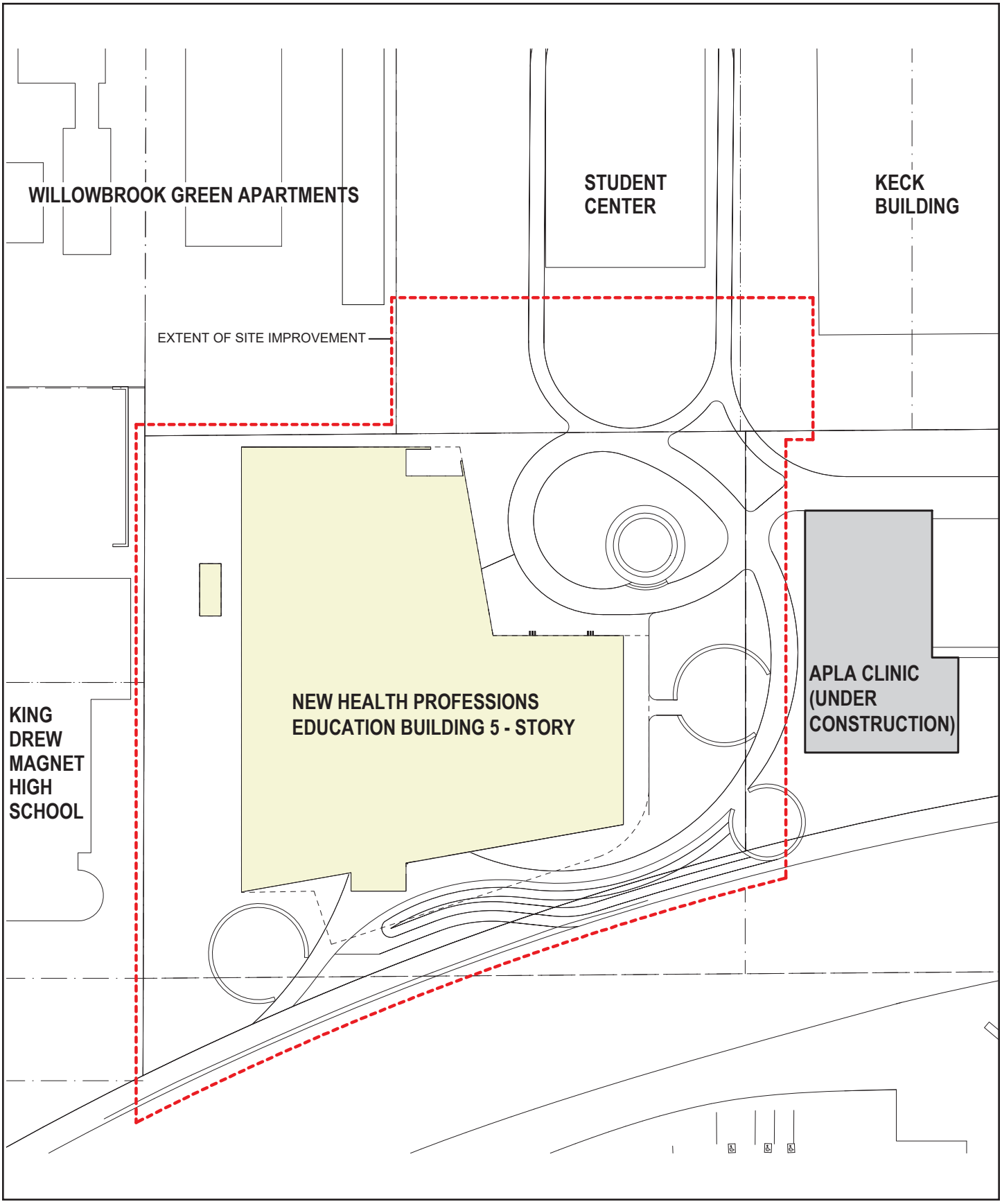
taha
environmental planners
TAHA 2020-095

Charles R. Drew University of Medicine and Science Health Profession Education Building Initial Study

COUNTY OF LOS ANGELES DEPARTMENT OF REGIONAL PLANNING

FIGURE 1

PROJECT LOCATION



Source: TAHA, 2021.

taha environmental planners

TAHA 2020-095

Charles R. Drew University of Medicine and Science Health Profession Education Building Initial Study

COUNTY OF LOS ANGELES DEPARTMENT OF REGIONAL PLANNING

FIGURE 2

SITE PLAN

The proposed building would be designed to achieve Leadership in Energy and Environmental Design (LEED) Gold equivalent level. Sustainable elements may potentially include, but are not limited to, photovoltaic panels on the roof, below-grade filtration tanks to collect and treat stormwater runoff and wastewater, building systems that employ a mix of passive and energy-efficient active strategies, locally sourced structural and finish materials that may include recycled content, and classrooms that take advantage of natural light and daylighting strategies to promote energy-efficiency.

A total of 73 existing and proposed parking spaces would be allocated to the proposed project. The existing surface parking lot at the northeast corner of Compton Avenue and 118th Street, which has 85 spaces, would have 65 spaces allocated to the proposed project. The proposed project does not propose any changes to this parking lot. As part of the proposed project, the parking facility on the 118th Street (between the former Abraham Lincoln Elementary School and the Park Water Company Well 19C property) would be expanded. The existing three-level parking structure at the northern part of this parking facility would extend south over the existing surface parking lot. The proposed parking structure would connect to the existing three-level parking structure. The proposed parking structure would provide an additional 8 parking spaces that would support the additional square footage associated with the proposed building. Access to the existing surface parking lot and parking structure is currently provided on 118th Street. With implementation of the proposed project, a new driveway approach would be provided on 117th Street, and access to this parking facility would be via 117th and 118th Streets.

The existing access road on the west side of the project site would be maintained as part of the proposed project and would provide parking for deliveries, trash pick up, and access to the proposed loading docks of the proposed HPEB.

Construction is expected to begin in 2023 and last 24 months, with occupancy expected in 2025. Construction activities include site clearing/demolition, excavation/grading, building construction, paving, architectural coating, and landscaping. Construction would involve demolishing the existing two modular buildings, removing existing landscaping, and building a five-story, 92,618-square-foot HPEB on the project site. The following elements would be implemented during construction:

- Power construction equipment would be equipped with noise shielding and muffling devices (consistent with manufacturers' standards).
- All equipment would be property maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.
- Temporary noise barriers (e.g., plywood structures or flexible sound control curtains) extending eight feet in height would be erected around the northern and western perimeter of the construction area.
- When possible, on-site electrical sources would be used to power equipment rather than diesel generators.
- Equipment would be turned off when not in use for more than five minutes, except for equipment that requires idling to maintain performance.
- Construction staging areas would be located away from residences and King Drew Magnet High School.
- Construction activities whose specific location on the project site may be flexible (e.g., operation of compressors and generators) would be conducted as far away as possible from residences and King Drew Magnet High School.
- A "noise disturbance coordinator" would be established and would be responsible for responding to local complaints about construction noise. The noise disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to residences within 500 feet of the construction site and all signs posted at the construction site would list the telephone number for the noise disturbance coordinator.

Surrounding land uses and setting: Land uses surrounding the project site are institutional, commercial, and residential (**Figure 3**). The project site is bounded by CDU buildings and a two-story multi-family housing complex to the north, a two-story APLA Health Clinic to the east, 120th Street to the south, and King Drew Magnet High School of Medicine and Science to the west. The Martin Luther King, Jr. Medical Campus is located across the street on 120th Street to the south. Single-family residential uses are located further south from the project site; commercial and a mix of single- and multi-family residential uses are located further west; Abraham Lincoln Elementary School (closed since 2017), a mix of single- and multi-family residential uses, and Interstate 105 (I-105) are located further north; and health clinics/medical offices, Drew Child Development Corporation, Los Angeles County Fire Station No. 41, and commercial uses are located further east of the project site. The Willowbrook/Rosa Parks Los Angeles Metropolitan Transportation Authority (Metro) Station for the Metro A (Blue) and C (Green) light rail lines is approximately 0.42 miles northeast of the project site.

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

The County Department of Regional Planning notified the California Native American tribes that are traditionally and culturally affiliated with the geographic area of the project site on June 24, 2021. The Gabrieleno Band of Mission Indians - Kizh Nation responded to the consultation letter, and the County Department of Regional Planning met with the Kizh Nation on October 28, 2021. As part of the tribal consultation, tribal representatives provided information regarding the tribe's ancestral localities in the area surrounding the project site. Given the location of the project site, tribal representatives indicated that the project site is highly sensitive for tribal cultural resources and provided mitigation measures to avoid a significant effect on tribal cultural resources. See Section 18, Tribal Cultural Resources, of this Initial Study for further discussion.

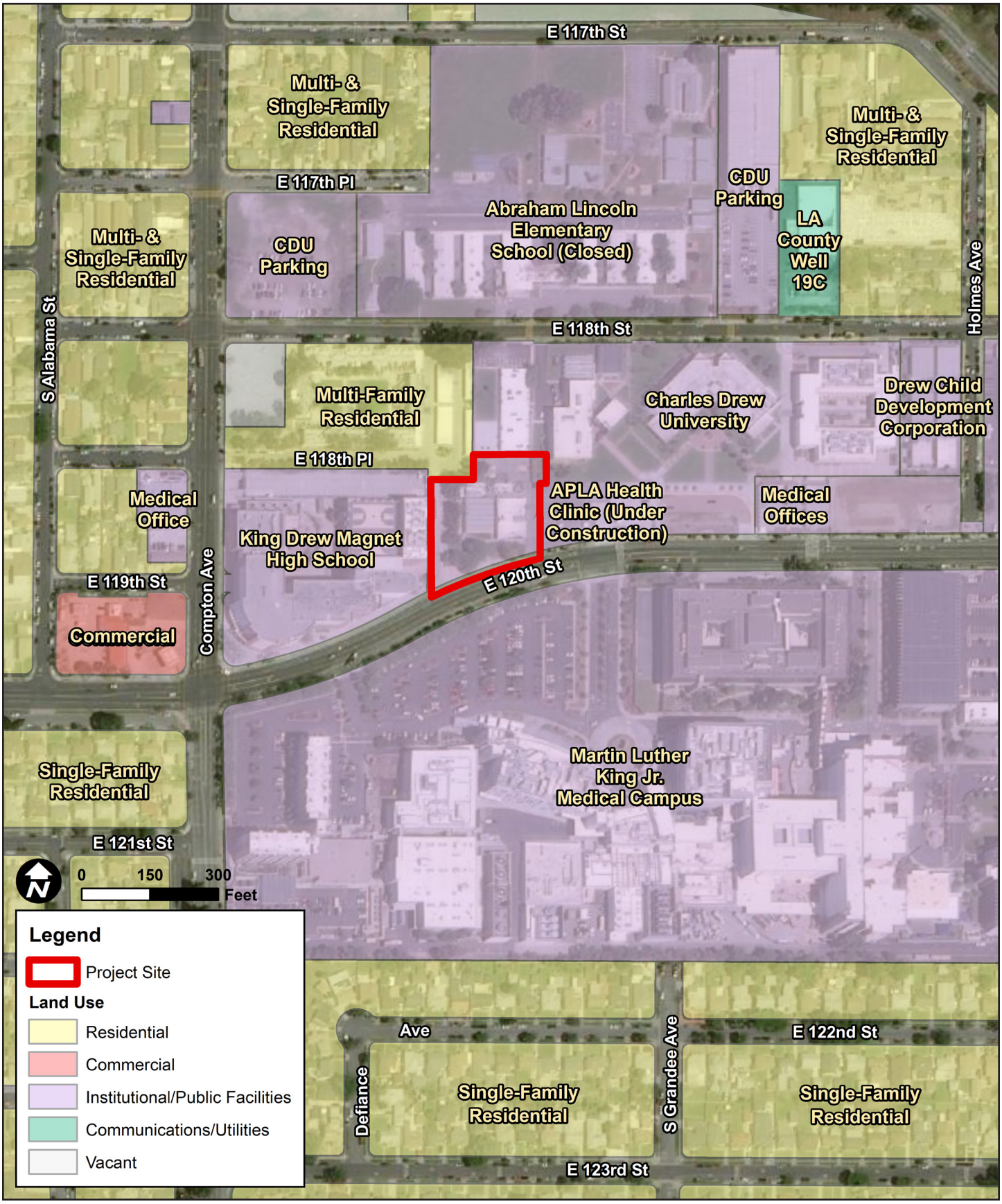
Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

Public Agency	*Approval Required*
None	

Major projects in the area:

Project/Case No.	*Description and Status*
None	



Source: TAHA, 2021.

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TAHA 2020-095

Charles R. Drew University of Medicine and Science Health Profession Education Building Initial Study

COUNTY OF LOS ANGELES DEPARTMENT OF REGIONAL PLANNING

FIGURE 3

SURROUNDING USES

Reviewing Agencies: [*See* **CEQA Appendix B** *to help determine which agencies should review your project***]**

Responsible Agencies

- ☒ None
- Regional Water Quality Control Board:
  - ☐ Los Angeles Region
  - ☐ Lahontan Region
- ☐ Coastal Commission
- ☐ Army Corps of Engineers
- ☐ LAFCO

Special Reviewing Agencies

- ☒ None
- ☐ Santa Monica Mountains Conservancy
- ☐ National Parks
- ☐ National Forest
- ☐ Edwards Air Force Base
- ☐ Resource Conservation District of Santa Monica Mountains Area

Regional Significance

- ☒ None
- ☐ SCAG Criteria
- ☐ Air Quality
- ☐ Water Resources
- ☐ Santa Monica Mtns. Area

Trustee Agencies

- ☒ None
- ☐ State Dept. of Fish and Wildlife
- ☐ State Dept. of Parks and Recreation
- ☐ State Lands Commission
- ☐ University of California (Natural Land and Water Reserves System)

County Reviewing Agencies

- ☒ DPW
- ☐ Fire Department
  - Forestry, Environmental Division
  - Planning Division
  - Land Development Unit
  - Health Hazmat
- ☒ Sanitation District
- ☐ Public Health/Environmental Health Division: Land Use Program (OWTS), Drinking Water Program (Private Wells), Toxics Epidemiology Program (Noise)
- ☒ Sheriff Department
- ☐ Parks and Recreation
- ☐ Subdivision Committee

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially significant impacts affected by this project.

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

DETERMINATION: (To be completed by the Lead Department.)
On the basis of this initial evaluation:

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

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

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Teresa Li — 10/4/2022

Signature (Prepared by) — Date

B — October 4, 2022

Signature (Approved by) — Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources the Lead Department cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the Lead Department has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level. (Mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced.)

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA processes, an effect has been adequately analyzed in an earlier EIR or negative declaration. (State CEQA Guidelines § 15063(c)(3)(D).) In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7) The explanation of each issue should identify: the significance threshold, if any, used to evaluate each question; and mitigation measures identified, if any, to reduce the impact to less than significant. Sources of thresholds include the County General Plan, other County planning documents, and County ordinances. Some thresholds are unique to geographical locations.

1. AESTHETICS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

No Impact. The term "scenic vista" refers to views of focal points or panoramic views of broader geographic areas that are of visual interest. Focal points may include notable objects, buildings, or settings. Panoramic views are generally wide and extend into the distance. The value of a scenic vista would be diminished if the bulk or design of a building or development would contrast enough with a visually interesting view such that the quality of the view would be permanently affected. The project site is located within a highly urbanized area in the unincorporated Willowbrook community of Los Angeles County. The proposed project would not obstruct any scenic vistas since no scenic vistas are available on or within the vicinity of the project site. Therefore, no impact would occur.

b) Be visible from or obstruct views from a regional riding, hiking, or multi-use trail?	☐	☐	☐	☒

No Impact. The project site is located within a highly urbanized area in the unincorporated Willowbrook community. The project site is not located within the vicinity of a regional riding, hiking, or multi-use trail. The proposed structure would have a maximum height of 75 feet, which would be consistent with the existing building heights of the surrounding area. The proposed project would not block or obscure any public views from a regional riding, hiking, or multi-use trail. Therefore, no impact would occur.

c) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

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 near any state designated scenic highways, and no scenic resources are located on or adjacent to the project site. The nearest eligible state scenic highway is State Route 1 (SR-1) south of Lakewood Boulevard/Atherton Street. This eligible state scenic highway is approximately 11 miles south of the project site,[1] and the project site is not within the viewshed of this eligible state scenic highway. Additionally, no scenic resources would be affected by the proposed project. Therefore, no impact would occur.

[1] California Department of Transportation, *California State Scenic Highway System Map*, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983, accessed March 2021.

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

Less-Than-Significant Impact. The project site is located in an urbanized area, and a significant impact would occur if the proposed project would conflict with applicable zoning and other regulations governing scenic quality. The project site is in the Drew Educational Specific Plan Zone of the Willowbrook TOD Specific Plan area. The Drew Education Specific Plan Zone limits building heights to a maximum of 75 feet and six stories and FAR to 1.5. Buildings are required to have a minimum setback of 10 feet from the street. Additionally, at least 20 percent of the project site is required to be landscaped, and mechanical equipment are required to be screened from view.

The proposed project would comply with applicable setback, building height, and other regulations applicable to the Drew Educational Specific Plan Zone. It would also follow the Willowbrook TOD Specific Plan design guidelines for institutional uses. The proposed building would have a maximum building height of 75 feet, would be five stories tall, and would be setback from East 120th Street by 10 feet. At least 30 percent of the project site would be landscaped. All mechanical equipment would be placed on the roof and screened from public view using elements that would be an integral part of the prosed building, consistent with the development and design standards for the Drew Education Specific Plan Zone.

The proposed building would have an FAR of 2.15, which would exceed the maximum allowable FAR of 1.5 for the Drew Educational Specific Plan Zone. Although the FAR on the project site is limited to 1.5, the Martin Luther King, Jr. Medical Campus south of the project site has a 2.5 FAR. Additionally, the proposed building would be similar in height and massing as the surrounding uses, such as the four-story King Drew Magnet High School of Medicine and Science to the west and the five- and six-story buildings on the Martin Luther King, Jr. Medical Campus. The proposed project would require approval from the Los Angeles County Department of Regional Planning to construct a building with an FAR that is greater than 1.5. Upon approval from the Los Angeles County Department of Regional Planning to increase its FAR from 1.5 to 2.15, the proposed project would not conflict with applicable regulations governing scenic quality. Therefore, with the Los Angeles County Department of Regional Planning approval of the proposed FAR increase, less-than-significant impacts related to visual character and scenic quality are expected.

e) Create a new source of substantial shadows, light, or glare which would adversely affect day or nighttime views in the area? ☐ ☐ ☒ ☐

Less-Than-Significant Impact. Shadow-sensitive uses generally include routinely useable outdoor spaces associated with residential, recreational, or institutional land uses; commercial uses, such as pedestrian-oriented outdoor spaces or restaurants with outdoor seating areas; nurseries; and existing solar collectors/panels. Due to the sun's angle in the northern hemisphere, shadows are cast in a clockwise direction from west/northwest to east/northeast from approximately 7:00 a.m. to 4:00 p.m. or later depending on the time of the year. No shadow-sensitive uses are located adjacent to the proposed HPEB to the west/northwest and east/northeast. A multi-family residential property is situated to the northeast of the parking structure that is being proposed on 118th Street. The closest useable outdoor space associated with this multi-family residential property is approximately 85 feet northeast of the proposed parking structure. The proposed parking structure would be at a similar scale as the existing parking structure located immediately north of the proposed parking structure. The existing parking structure adjoins the multi-family residential property and is

situated closer to the multi-family residential property than the proposed parking facility. As the existing parking structure is located closer to the multi-family residential development and the proposed parking structure would be at a similar height and scale as the existing parking structure, the proposed parking structure would not create a new source of substantial shadow at the multi-family residential development.

Light impacts are typically associated with the use of artificial light during the evening and nighttime hours. Glare is typically a daytime occurrence caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass and reflective cladding materials, and may interfere with the safe operation of a motor vehicle on adjacent streets. Daytime glare is common in urban areas and is typically associated with mid- to high-rise buildings with exterior façades largely or entirely comprised of highly reflective glass or mirror-like materials. Nighttime glare is primarily associated with bright point-source lighting that contrasts with existing low ambient light conditions. Due to the urban setting of the project site, a moderate level of ambient nighttime light already exists on the project site. Existing nighttime light sources include streetlights, vehicle headlights, lighting from surface parking lots, and interior and exterior building illumination. Lighting that would be provided by the proposed project would be consistent with existing lighting on and surrounding the project site. In addition, the proposed project does not include features that would be a major source of glare. Any light and glare produced by the proposed project would commensurate with existing lighting levels and glare on the project site and its vicinity. Additionally, the proposed project would be consistent with the exterior lighting requirements of the Willowbrook TOD Specific Plan design guidelines. such as providing exterior lighting for security and safety of on-site areas; shielding light fixtures to confine light spread; and providing and placing lighting that preclude direct glare onto adjoining property, streets, or skyward. Therefore, the proposed project would not create new sources of substantial light or glare. As the proposed project would not create new sources of substantial shadow, light, or glare, impacts would be less than significant.

2. AGRICULTURE / FOREST

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.

	Potentially Significant Impact	***Less Than Significant Impact with Mitigation Incorporated***	***Less Than Significant Impact***	***No Impact***
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?	☐	☐	☐	☒

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. Due to its urban setting, the project site and its surroundings are not included in the Farmland Mapping and Monitoring Program of the California Department of Conservation. The Department of Conservation categorized the project site as Urban and Built-Up Land.[2] In addition, the project site is not located within a zone designated for agricultural use or an area that is designated as Williamson Act contract lands. No agricultural uses or related operations are present within the project site or in the surrounding area. Therefore, no impact on farmland would occur.

b) Conflict with existing zoning for agricultural use, with a designated Agricultural Resource Area, or with a Williamson Act contract?	☐	☐	☐	☒

No Impact. See Response to Checklist Question 2a.

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

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. The project site is located within an urban area that is not zoned as forest land. There are no forest land or forest resources located on the project site or in the surrounding area. Therefore, no impact would occur.

[2] California Department of Conservation, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed March 2021.

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

No Impact. See Response to Checklist Question 2c.

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?	☐	☐	☐	☒

No Impact. As discussed in Response to Checklist Questions 2a through 2d, no agricultural or forestry operations occur on the project site or its vicinity. 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.

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.

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

Less-Than-Significant Impact. The project site is located within the South Coast Air Basin (SCAB), and the air quality plan applicable to the project site is the South Coast Air Quality Management District (SCAQMD) 2016 Air Quality Management Plan (AQMP). The 2016 AQMP is based on regional growth population and employment projections provided in the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2016 AQMP provides policies and control measures that will reduce emissions to attain the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) by their applicable deadlines. Environmental review of individual projects within 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, 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 generated by construction workers and haul trucks traveling to and from the project site. Fugitive dust emissions would primarily result from site preparation (e.g., excavation 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 SCAB to comply with SCAQMD Rule 403 for Fugitive Dust. Rule 403 control requirements include measures to prevent the generation of visible dust plumes. Measures 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 Rule 403 would reduce regional $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent.

Construction is expected to begin in 2023 and last 24 months, with occupancy expected in 2025. Construction activities include site clearing/demolition, excavation/grading, building construction, paving, architectural coating, and landscaping. Construction would involve demolishing the existing two modular buildings, removing the existing landscaping, and the building of a five-story, 92,618-square-foot HPEB on the project site. Site preparation would include the export of approximately 5,200 cubic yards of existing fill. Construction activities would involve the use of a backhoe, grader, crane, lifts, bobcat, and similar equipment. Maximum daily emissions for each construction activity were estimated based on heavy duty equipment use, fugitive dust (on-site), and vehicular travel to and from the project site (off-site). **Table 1** shows the maximum unmitigated daily regional emissions for each construction activity. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds.

TABLE 1: ESTIMATED REGIONAL CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (Pounds Per Day)					
Construction Activity	**VOC**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
DEMOLITION AND SITE CLEARING						
On-Site Emissions	0.6	6.2	5.2	<0.1	0.7	0.3
Off-Site Emissions	0.1	1.3	1.0	<0.1	0.4	0.1
Total	**0.7**	**7.5**	**6.2**	**<0.1**	**1.1**	**0.4**
EXCAVATION AND GRADING						
On-Site Emissions	0.7	7.3	5.6	<0.1	0.5	0.3
Off-Site Emissions	0.2	2.4	1.9	<0.1	0.8	0.2
Total	**0.8**	**9.7**	**7.5**	**<0.1**	**1.3**	**0.5**
BUILDING CONSTRUCTION						
On-Site Emissions	0.7	8.6	10.6	<0.1	0.3	0.3
Off-Site Emissions	1.1	2.0	10.5	<0.1	3.6	1.0
Total	**1.8**	**10.6**	**21.1**	**<0.1**	**3.9**	**1.3**
PAVING						
On-Site Emissions	0.6	5.6	8.6	<0.1	0.3	0.3
Off-Site Emissions	0.1	0.7	1.5	<0.1	0.6	0.1
Total	**0.7**	**6.2**	**10.1**	**<0.1**	**0.8**	**0.4**
ARCHITECTURAL COATING						
On-Site Emissions	10.1	3.0	4.7	<0.1	0.1	0.1
Off-Site Emissions	0.1	0.1	1.2	<0.1	0.5	0.1
Total	**10.2**	**3.1**	**6.0**	**<0.1**	**0.6**	**0.3**
BUILDING CONSTRUCTION + PAVING + ARCHITECTURAL COATING OVERLAP						
On-Site Emissions	11.4	17.1	23.9	<0.1	0.7	0.7
Off-Site Emissions	1.3	2.9	13.2	<0.1	4.6	1.3
Total	**12.7**	**19.9**	**37.1**	**0.1**	**5.3**	**1.9**
REGIONAL ANALYSIS						
Maximum Daily Emissions	**12.7**	**19.9**	**37.1**	**0.1**	**5.3**	**1.9**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Emissions modeling files can be found in Appendix A.
SOURCE: CalEEMod, Version 2020.4.0, TAHA, 2021.

Operational Emissions. The proposed project would generate regional operational emissions from vehicle trips and energy use. The proposed project would generate approximately 299 daily trips. The CalEEMod program generates emissions estimates from energy use based on the land use type and project size. **Table 2** presents the estimated operation emissions of the proposed project. As shown, future operation of the proposed project would not result in daily emissions that exceed any of the applicable SCAQMD thresholds.

TABLE 2: ESTIMATED DAILY OPERATIONAL EMISSIONS

Operational Activity	Maximum Daily Emissions (Pounds Per Day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
EMISSIONS ANALYSIS						
Area Sources	2.2	<0.1	<0.1	<0.1	<0.1	<0.1
Energy Sources	0.1	0.7	0.6	<0.1	<0.1	<0.1
Mobile Sources	0.8	0.8	7.8	<0.1	1.9	0.5
IMPACT ANALYSIS						
Daily Operational Emissions	**3.1**	**1.6**	**8.5**	**<0.1**	**2.0**	**0.6**
Regional Threshold	55	55	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Emissions modeling files can be found in Appendix A.
SOURCE: CalEEMod, Version 2020.4.0, TAHA, 2021.

Consistency Criterion 2: AQMP Growth Forecasts

The second AQMP consistency criterion requires that the proposed project not exceed the assumptions in the AQMP, which is based on the growth projections from the SCAG 2015-2040 RTP/SCS. The proposed project would accommodate 240 new students and 25 new employees. No student housing is currently located on the CDU campus and the proposed project does not include any housing. CDU is a commuter school where approximately 70 percent of existing CDU students are from Los Angeles County and 15 percent are from the surrounding south Los Angeles area. While many of the future students and employees that may be generated as a result of the proposed project may already live in the surrounding area, some of the additional students and employees that would be generated from the new program may come from outside of the surrounding area or the broader Los Angeles County region. As a result, the proposed project may induce some population growth. Between 2020 and 2030, SCAG forecasts population to increase by approximately 2,870 persons in the unincorporated Willowbrook community.[3] If all of the new students and employees are conservatively assumed to move from outside of the community, the increase in 265 people would still be within the SCAG population growth projections for the unincorporated community. The proposed project would not induce population growth beyond those that are already forecasted for the unincorporated Willowbrook community. Therefore, the proposed project would not result in growth that would exceed the projections incorporated into the AQMP. See Response to Checklist Question 14a for further detail regarding the potential population increase associated with the proposed project.

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 (Consistency Criterion 1). 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 (Consistency

[3] SCAG, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*, April 2016.

Criterion 2). Therefore, the proposed project would be consistency with the AQMP and a less-than-significant impact would occur.

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

Less-Than-Significant Impact. SCAB has ongoing cumulative regional emissions for O_3, PM_{10}, and $PM_{2.5}$ since the region is designated as non-attainment of the CAAQS and NAAQS for these air pollutants. Considering existing environmental conditions, SCAQMD propagated guidance that an individual project can emit allowable quantities of these pollutants on a regional scale without significantly contributing to cumulative emissions of criteria pollutants for which the region is non-attainment. As such, individual projects that do not generate emissions greater than the SCAQMD regional significance thresholds are not expected to result in cumulatively considerable net increase of any criteria pollutant for which SCAB is non-attainment. As discussed in Response to Checklist Question 3a, daily regional emissions associated with construction and operation of the proposed project would be below all applicable regional SCAQMD thresholds. Therefore, the proposed project would not result in a cumulatively considerable net increase of non-attainment pollutants, and a less-than-significant impact would occur.

c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

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 dense urban environment and many of the land uses described above are located within 500 meters of the project site. Sensitive receptors surrounding the project site include medical buildings on the CDU campus and a two-story multi-family housing complex to the north; a two-story APLA Health Clinic to the east; King Drew Magnet High School of Medicine and Science to the west; and the Martin Luther King, Jr. Medical Campus across the street on 120th Street to the south. Single-family residential uses are located further south from the project site; a mix of single- and multi-family residential uses are located further west; a mix of single- and multi-family residential uses; and health clinics/medical offices and the Drew Child Development Corporation, are located further east of the project site. Additionally, a multi-family residential development is located to on the east side of the existing 118th Street parking facility.

Construction

Sensitive receptors surrounding the project site may be exposed to pollutant concentrations emanating from emissions sources involved in construction activities for the proposed project. SCAQMD established a Localized Significance Threshold (LST) methodology to determine the likelihood of substantial criteria pollutant concentrations reaching sensitive receptor locations. Mobile source emissions on the roadway network are spread across long distances and do not directly affect receptors in close proximity to the project site. The LST methodology involves screening values for daily emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ that are generated exclusively by sources located on project sites. LST values were determined using emissions modeling based on ambient air quality measured throughout SCAB. If maximum daily emissions remain below the LST values during construction activities, it is highly unlikely that air pollutant concentrations in the

ambient air would reach substantial levels sufficient to create public health concerns for sensitive receptors. As shown in **Table 3**, maximum daily emissions of criteria pollutants and ozone precursors would not exceed any of the applicable LST values. Therefore, construction of the proposed project would not result in exposure of sensitive receptors to substantial concentrations of criteria pollutants.

TABLE 3: PROPOSED PROJECT CONSTRUCTION EMISSIONS – LOCALIZED ANALYSIS

	On-Site Daily Emissions (lbs./day)			
Phase	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition & Site Clearing	6.2	5.2	0.7	0.3
Excavation & Grading	0.7	7.3	0.5	0.3
Building Construction	0.7	8.6	0.3	0.3
Building Construction, Paving, and Architectural Coating Overlap	11.4	17.1	0.7	0.7
LOCALIZED ANALYSIS				
Maximum Localized Daily Emissions	**11.4**	**17.1**	**0.7**	**0.7**
SRA 12 Localized Significance Threshold /a/	46	231	4	3
Exceed Localized Significance Threshold?	**No**	**No**	**No**	**No**

/a/ Per the SCAQMD LST methodology, the project site is located in Source Receptor Area (SRA) 12.
SOURCE: TAHA, 2021.

With regards to TAC emissions, carcinogenic risks, and non-carcinogenic hazards, the use of heavy-duty construction equipment and haul trucks during construction activities would release diesel particulate matter (PM) to the atmosphere through exhaust emissions. However, carcinogenic risks are typically assessed over timescales of several decades, as the carcinogenic dose response is cumulative in nature. Construction of the proposed project would last for approximately 24 months, and daily emissions of diesel PM would fluctuate throughout the construction period. Short-term exposures to diesel PM would have to involve extremely high concentrations (such as through intensive, lengthy earthwork activities) in order for health risk impacts to occur on shorter timelines. Over the course of construction activities, average diesel PM emissions from on-site equipment would be approximately 0.4 pounds per day. It is unlikely that diesel PM concentrations would be of any public health concern during the 24-month construction period, and diesel PM emissions would cease upon completion of construction activities. The proposed project diesel exhaust emissions from equipment combined with the length of the construction period would not generate substantial emissions that would cause a health risk to adjacent land uses. In addition, the size and location of the project site indicates that only during a limited portion of construction activities would heavy-duty diesel-powered equipment be operating within 100 feet of sensitive receptors, and all construction equipment would be maintained in accordance with the CARB Portable Engine Air Toxics Control Measure and the Off-Road Diesel Regulation to control emissions to the maximum extent feasible. Therefore, construction of the proposed project would result in a less-than-significant impact related to substantial pollutant concentrations at sensitive receptors during construction activities.

Operation

The proposed project does not include an industrial component that would constitute a new substantial stationary source of operational air pollutant emissions (e.g., emergency diesel generator) and does not include a land use that would generate a substantial number of heavy-duty truck trips within the region. The proposed project would not generate air toxic emissions that would expose sensitive receptors to substantial pollutant concentrations. Therefore, the proposed project would result in a less-than-significant impact related to substantial pollutant concentrations during operational activities.

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

Less-Than-Significant Impact.

Construction
Odors are the only potential construction emissions other than the sources addressed above in Response to Checklist Questions 3a through 3c. 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. The proposed project would utilize typical construction techniques, and odors from these sources would be typical of most construction sites, would be localized, would be generally confined to the immediate area surrounding the project site, would be temporary in nature, and would not persist beyond the termination of construction activities. 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. Therefore, the proposed project would result in a less-than-significant impact related to construction odors.

Operation
Odors are the only potential operational emissions other than the sources addressed above in Response to Checklist Questions 3a through 3c. Land uses and industrial operations that are typically associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding.[4] The proposed project does not contain any of these land uses or industrial operations associated with odor complaints. The proposed structure would contain a café that would produce some odors and smells associated with the preparation of food. Proposed project 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. On-site trash receptacles would have the potential to create adverse odors. The proposed project would mitigate associated trash odors by properly storing and disposing of trash in compliance with the Los Angeles County Municipal Code (Chapter 11.16). Therefore, the proposed project would result in a less-than-significant impact related to odors during operational activities.

[4] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

4. BIOLOGICAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	☐	☐	☐	☒

No Impact. A significant biological 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 within an urban area and is currently developed with two modular buildings, a surface parking lot, and ornamental landscaping. No native vegetation exists on or adjacent to the project site.

The California Natural Diversity Database (CNDDB), a computerized database that identifies past occurrences of species of special concern (e.g., plants, animals, and communities that are rare, threatened, or endangered), does not identify any candidate, sensitive, or special status species on the project site or within approximately 0.25 mile of the project site.[5] Additionally, the entire project site has been disturbed and developed (i.e., modular structures, ornamental landscaping, and paved areas). Suitable habitat for special-status wildlife species do not occur within the project site. Since no special-status species were identified or have high likelihood of occurring on the project site, it is unlikely that the proposed project would result in the loss or destruction of individual candidate, sensitive, or special status species or the degradation of sensitive habitat. Therefore, the proposed project would not have an 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 CDFW or USFWS. No impact would occur.

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 CDFW or USFWS?	☐	☐	☐	☒

No Impact. A significant impact would occur if a riparian habitat or natural community would be lost or destroyed as a result of the proposed project. As discussed in Response to Checklist Question 4a, the project site is completely disturbed and is located within an urbanized area surrounded primarily by residential uses. The project site does not contain any riparian habitat or features. No streams or water courses necessary to support riparian habitat are present on the project site. Additionally, CNDDB has not listed any riparian habitat or other sensitive natural communities on or in the vicinity of the project site. Therefore, the proposed project is not expected to result in the loss of or destroy any riparian habitat or other sensitive natural communities, and no impact would occur.

[5] California Department of Fish and Wildlife, *California Natural Diversity Database (CNDDB)*, https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data, accessed March 2021.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means? ☐ ☐ ☐ ☒

No Impact. A significant impact would occur if federally protected wetlands would be modified or removed as a result of the proposed project. The project site does not contain any state or federally protected wetlands. No waterbodies are located on or in the vicinity of the project site. Therefore, 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 would occur.

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? ☐ ☐ ☒ ☐

Less-Than-Significant Impact. 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 known to exist on or immediately surrounding the project site. The project site does not contain any waterbodies 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. Several mature trees are located within the project site and could potentially be removed during construction. Tree removal on the project site would be required to comply with the Migratory Bird Treaty Act (MBTA). Under MBTA, if tree removal activities occur during the nesting season (February 15 through August 15), a biological monitor would need to be present during the removal activities to ensure that no active nests would be adversely affected. Additionally, if clearing/vegetation removal would occur during the nesting season, the County requires a pre-construction nest survey to be conducted one week prior to the clearing/vegetation removal activity. The proposed project is not expected to interfere with wildlife movement or impede the use of native wildlife nursery sites. Therefore, a less-than-significant impact would occur.

e) Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or other unique native woodlands (juniper, Joshua, southern California black walnut, etc.)? ☐ ☐ ☐ ☒

No Impact. No oak woodlands or other unique native trees are present on the project site or in the surrounding area. The project site and surrounding area is highly urbanized area and has been previously disturbed. Therefore, no impact would occur.

f) Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.174), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, Ch. 102), Specific Plans (L.A. County Code, Title 22, Ch. 22.46), Community Standards Districts (L.A. County Code, Title 22, Ch. 22.300 et seq.), and/or Coastal Resource Areas (L.A. County General Plan, Figure 9.3)? ☐ ☐ ☐ ☒

No Impact. A significant impact would occur if the proposed project were inconsistent with local regulations pertaining to biological resources. As discussed in Response to Checklist Question 4d, several trees on the project site could potentially be removed. Section 22.46.2100 of the Los Angeles County Municipal Code protects all oak trees with a diameter at breast height of eight inches or grater, or 12 inches or grater for multiple trunks (combination of two largest trunks). No oak trees are present on the project site. Additionally, the project site and surrounding area is not in a Wildflower Reserve Area, an SEA, or Coastal Resource Area. The proposed project would comply with local policies and ordinances protecting biological resources. Therefore, no impact would occur.

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

No Impact. A significant impact would occur if the proposed project were inconsistent with an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan. The project site is not located within or adjacent to the boundaries of any HCPs, NCCPs, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

5. CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☐	☒

No Impact. A significant impact would occur if the proposed project would remove or substantially alter the significance of a historical resource. CEQA Guidelines Section 15064.5 generally defines 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 California Historical Resources Information System (CHRIS) maintains a wide range of documents and materials related to historical resources and archaeological sites. CHRIS operates structurally through the California Office of Historic Preservation, nine Information Centers, and the State Historical Resources Commission. The project site is located within the South Central Coastal Information Center (SCCIC) service area. An SCCIC records search was conducted for the project site. The records search includes a review of all recorded archaeological and built-environment resources, as well as a review of cultural resource reports on file, on the project site and within 0.5 miles of the project site. The records search also included a review of the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources, the National Register of Historic Places, the California State Built Environment Resources Directory, and the City of Los Angeles Historic-Cultural Monuments (LAHCM) listings for the project site and within 0.25 miles of the project site. The records search results indicate that the project site does not have any built environment resources, California Points of Historical Interest, California Historical Landmarks, California Register of Historical Resources, or National Register of Historic Places on the project site.[6] In addition to the SCCIC records search results, the two existing one-story modular buildings on the project site are not listed and are not eligible for listing in the Los Angeles County Register of Landmarks and Historic Districts (the County's official list of County-designated landmarks and historic districts in the unincorporated area of the County).[7] Therefore, no impact related to historical resources would occur.

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

No Impact. 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 SCCIC records search results indicate that no

[6] South Central Information Center, *Re: Record Search Results for the Proposed Charles Drew University of Medicine and Science Health Professions Education Building at 1731 East 120th Street, Los Angeles*, August 20, 2021.
[7] Los Angeles County Historical Landmarks & Records Commission, *Los Angeles County Landmark and Historic District Registration*, http://hlrc.lacounty.gov/Landmark-Registration/Los-Angeles-County-Landmark-Registration, accessed March 2021.

archaeological resources are on the project site or within 0.5 miles of the project site.[8] The project site is located in an urbanized area that has been previously disturbed. Any surficial archaeological resources that may have existed on the project site are likely to have been previously disturbed or removed. Construction of the proposed project would not involve deep levels of excavation. Excavation activities would be limited to a few feet below existing surface and is not expected to disturb native soil and any undiscovered archaeological resources. Therefore, no impact would occur.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

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 has been previously disturbed, and the proposed project would not involve substantial excavation. 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 event that human remains are encountered, the proposed project would be required to comply with Section 7050.5 of the California Health and Safety Code. If human remains of Native American origin are discovered during construction, the proposed project would also be required to comply with Public Resources Code Section 5097.98 relating to the handling of Native American human remains. With compliance of the State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, a less-than-significant impact would occur.

[8] South Central Information Center, *Re: Record Search Results for the Proposed Charles Drew University of Medicine and Science Health Professions Education Building at 1731 East 120th Street, Los Angeles*, August 20, 2021.

6. ENERGY

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐

Less-Than-Significant Impact. 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 of the proposed project would require the one-time expenditure of 67,227 gallons of diesel fuel (off-road equipment and on-road trucks) and approximately 405,576 gallons of gasoline. Relative to 2018 Los Angeles County consumption, construction fuel use would represent less than 0.0002 percent of annual countywide retail sales of diesel and gasoline fuels. Construction fuels consumption would not place a strain on regional petroleum fuels resource availability or supply.

Construction activities would comply with the 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 and the Clean Energy and Pollution Reduction Act of 2015 (Senate Bill [SB] 350). Compliance with local, state, and federal regulations would reduce short-term energy demand during the proposed project's construction to the extent feasible, and proposed project construction would not result in a wasteful or inefficient use of energy.

During operations of the proposed project, Southern California Edison would provide electricity and Southern California Gas Company would provide natural gas to the project site. The proposed project would use approximately 963 megawatt-hour (MWh) of electricity per year and 2,682 Million British thermal units (MMBTU) of natural gas per year. Energy use associated with operation of the proposed project would be typical of institutional 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. The proposed project would comply with provisions of the California Green Building Standard Code (CalGreen Code) and would implement water conservation strategies. 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. These trips would use approximately 28,370 gallons of gasoline. 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.

Los Angeles County has adopted a Community Climate Action Plan (CCAP) to mitigate and avoid greenhouse gas (GHG) emissions associated with community activities in unincorporated Los Angeles County. In August

2015, the CCAP was incorporated into the Air Quality Element of the Los Angeles County General Plan 2035. CCAP identifies emissions related to community activities, establishes a GHG reduction target consistent with the Global Warming Solutions Act (Assembly Bill [AB] 32), and provides a roadmap for successfully implementing GHG reduction measures selected by the County. The CCAP proposes several local actions related to energy-efficiency and conservation, including green building standards for new development. The proposed project will be subject to the California Green Building Standards Code, which requires new buildings to reduce water consumption, employ building commissioning to increase building system efficiencies for large buildings, divert construction waste from landfills, and install low pollutant-emitting finish materials.

The proposed building would be designed to achieve LEED Gold equivalent level. Sustainable elements may potentially include, but are not limited to, photovoltaic panels on the roof, below-grade filtration tanks to collect and treat stormwater runoff and wastewater, building systems that employ a mix of passive and energy-efficient active strategies, locally sourced structural and finish materials that may include recycled content, and classrooms that take advantage of natural light and daylighting strategies to promote energy-efficiency. The proposed project does not include any feature (i.e., substantially alter energy demands) that would interfere with implementation of these state and City codes and plans and would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, a less-than-significant impact is expected.

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

Less-Than-Significant Impact. As discussed in Response to Checklist Question 6a, construction activities associated with the proposed project would comply with CARB's "In-Use Off-Road Diesel Fueled Fleets Regulation" and SB 350 to reduce short-term energy demand during the construction of the proposed project. During operations, the proposed project would comply with provisions of the CalGreen Code, which requires energy-efficiencies and conservation. The proposed project does not include any feature (i.e., substantially alter energy demands) that would interfere with implementation of state and local plans and would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, a less-than-significant impact would occur.

7. GEOLOGY AND SOILS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒

No Impact. A significant impact would occur if the proposed project would expose people or structures to the rupture of a known earthquake fault in a manner that would result in personal injury, personal death, or property damage. The Alquist-Priolo Earthquake Fault Zoning Act regulates development near active faults to mitigate the hazard of surface fault rupture. Surface fault rupture occurs when movement on a fault deep within the earth breaks through to the surface. The Act 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.

According to the California Geological Survey Earthquake Zones of Required Investigation, the project site is not located within an Alquist-Priolo Earthquake Fault Zone and no trace of any known active or potentially active earthquake fault passes through the project site. The closest known active fault zone is the Newport-Inglewood Earthquake Fault Zone, approximately 1.7 miles west of the project site, and the Newport-Inglewood-Rose Canyon Fault Zone, approximately four miles north of the project site.[9] According to the Geotechnical Engineering Investigation for project site and the APLU Health Clinic that is currently under construction adjacent to the project site, the potential for ground rupture at and adjacent to the project site Is low since no known active or potentially active faults underlie the area and the area is not located within an Alquist-Priolo Earthquake Fault Zone.[10] Additionally, 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 type of development that would occur on the project site is typical of urban environments and would not involve deep excavation into the Earth or boring of large areas creating unstable seismic conditions or stresses in the Earth's crust that would result in the rupture of a fault. Therefore, no impact would occur.

[9] California Geological Survey, *Earthquake Zones of Required Investigation*, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed February 2021.
[10] Geotechnologies, Inc., *Geotechnical Engineering Investigation: Proposed CDU and APLA Health Unit*, October 30, 2019.

ii) Strong seismic ground shaking? ☐ ☐ ☒ ☐

Less-Than-Significant Impact. A significant impact would occur if the proposed project would result in personal injury, personal death, or property damage as a result of seismic ground shaking. 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 adverse effects involving strong seismic ground shaking. Additionally, the design and construction of any buildings on the project site would be required to conform to the California Building Code seismic standards, as well as all other applicable codes and standards to reduce impacts from strong seismic ground shaking. Therefore, impacts related to strong seismic ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction and lateral spreading? ☐ ☐ ☒ ☐

Less-Than-Significant Impact. A significant impact would occur if the proposed project would result in personal injury, personal death, or property damage as a result of liquefaction or other ground failure caused by ground shaking. 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. Factors that contribute to the potential for liquefaction include a low relative density of granular materials, a shallow groundwater table, and a long duration and high acceleration of seismic shaking. The effects of liquefaction include the loss of the soil's ability to support footings and foundations which may cause buildings and foundations to buckle.

According to the California Geological Survey Earthquake Zones of Required Investigation, the project site is located within a liquefaction zone.[11] A site-specific liquefaction analysis that was conducted as part of the Geotechnical Engineering Investigation for the project site and the adjacent APLU Health Center identified a potentially liquefiable layer of six feet in thickness at a depth of 18 feet below the existing grade. The site-specific liquefaction analysis indicates that the underlying soils would be susceptible to liquefaction. However, the potential for surface manifestation of liquefaction affecting the proposed structure is considered low with implementation of the recommendations contained within the Geotechnical Engineering Investigation. The Geotechnical Engineering Investigation also concluded that the potential for lateral spreading is considered remote since the topography of the area is relatively level. The County requires that the applicant and construction contractor implement the recommendations in the Geotechnical Engineering Investigation. The County Building Official would conduct on-site inspections to ensure that the proposed project has implemented the recommendations in the Geotechnical Engineering Investigation.

The design and construction of the proposed project would conform to current California Building Code (CBC) seismic standards, as well as all other applicable codes and standards. Implementation of the recommendations contained in the Geotechnical Engineering Investigation, along with the policies and actions required by the County Department of Public Works, CBC seismic standards, and other applicable codes and standards would ensure that the proposed project would be geotechnically sound and would not result in personal injury, personal death, or property damage as a result of liquefaction or other seismic-related

[11] California Geological Survey, *Earthquake Zones of Required Investigation*, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed March 2021.

ground failure. Therefore, impacts related to liquefaction and other seismic-related ground failure would be less than significant.

iv) Landslides?	☐	☐	☐	☒

No Impact. A significant impact would occur if the project site were located in a hillside area with unstable geological conditions or soil types that would be susceptible to failure when saturated. According to the California Geological Survey Earthquake Zones of Required Investigation, the project site is not located within a landslide area.[12] Additionally, the project site and its surrounding area are relatively flat. Therefore, no impact related to landslides would occur.

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

Less-Than-Significant Impact. A significant impact would occur if construction activities or future uses on the project site would result in substantial soil erosion or loss of topsoil. During ground disturbing activities, such as grading and excavation, 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 County-enforced National Pollution Discharge Elimination System (NPDES). The proposed project would also be required to implement the County's Low Impact Development (LID) standards, which includes requiring post-development peak storm water runoff discharge rate to not exceed the estimated pre-development rate for development where the increased peak storm water discharge rate would result in the potential for downstream erosion. During operation of the proposed project, the project site would have similar amount of impervious and unpaved areas as existing conditions. All unpaved areas would be landscaped. Therefore, the proposed project would not result in substantial soil erosion or the loss of topsoil. Less-than-significant impacts related to erosion are expected.

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

Less-Than-Significant Impact. A significant impact would occur if the project site has unstable geological conditions that would result in geological failure, including lateral spreading, off-site landslides, liquefaction, or collapse. The proposed project would not involve activities that would affect seismic conditions or alter underlying soil or groundwater characteristics that govern liquefaction potential. As discussed in Response to Checklist Questions 7a.iii and 7a.iv, the project site is in a liquefaction zone but is not in a landslide zone, respectively. The project site and the surrounding area are relatively flat and, thus, are not susceptible to landslides. A Geotechnical Engineering Investigation has been prepared for the proposed project and the adjacent APLU Health Unit. The Geotechnical Engineering Investigation requires review and approval by the County, and the County requires that the applicant and construction contractor implement the recommendations in the Geotechnical Engineering Investigation. The County Building Official would conduct on-site inspections to ensure that the proposed project has implemented the recommendations in the Geotechnical Engineering Investigation. Implementation of the recommendations contained within the Geotechnical Engineering Investigation for the project site, along with the policies and actions required by the County Public Works, CBC seismic standards, and other applicable codes and standards would ensure that the proposed project would be geotechnically sound and would not result in personal injury, personal

[12] California Geological Survey, *Earthquake Zones of Required Investigation*, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed March 2021.

death, or property damage as a result of liquefaction or other seismic-related ground failure. Therefore, impacts related to liquefaction would be reduced to less than significant levels.

Lateral spreading refers to landslides that commonly form on gentle slopes and that have rapid fluid-like flow movement, like water. It occurs when sloping ground starts to move downhill, causing cracks to open up. The project site is on relatively flat land and not located in a landslide zone. As a result, lateral spreading is not expected to occur on the project site.

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. According to the Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR), the project site is not located within an oil field and no oil wells are located within the project site.[13] Additionally, no tunnels, groundwater wells, covered quarries, or caves are located beneath the project site, and the proposed project does not include groundwater and oil extraction activities, or any other activities that would cause subsidence or ground collapse. Furthermore, the proposed project would be constructed in accordance with CBC, which is designed to assure safe construction and includes building foundation requirements appropriate to site conditions. Therefore, impacts related to geological failure, including lateral spreading, off-site landslides, liquefaction, or subsidence would be less than significant.

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

Less-Than-Significant 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 high clay content, expansive soils expand with the addition of water and shrink when dried, which can cause damage to overlying structures.

The Geotechnical Engineering Investigation for the project site and the adjacent ACLU Health Center identifies fill materials to a depth of three feet below the existing grade. The fill consists of sandy silt to sandy clay. The fill materials are underlain by native alluvial soils consisting of interlayered mixtures of sand, silt, and clay. The Geotechnical Engineering Investigation found that the soils on the project site have moderate potential to shrink and swell due to changes in the moisture content. The Geotechnical Engineering Investigation includes recommendations that would limit impacts associated with expansive soils. The County requires that the applicant and constructor implement the recommendations within the Geotechnical Engineering Investigation, and the County Building Official would conduct on-site inspections to ensure that the proposed project has implemented the requirements in the Geotechnical Engineering Investigation. Additionally, construction on the project site 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. Implementation of the recommendations contained in the Geotechnical Engineering Investigation would reduce impacts associated with expansive soils. Therefore, impacts related to expansive soil would be less than significant.

[13] California Department of Conservation Division of Oil, Gas, and Geothermal Resources, *Well Finder*, https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-118.24372/33.92480/17, accessed March 2021.

e) Have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater? ☐ ☐ ☐ ☒

No Impact. A significant impact would occur if adequate wastewater disposal were not available for the proposed project. The project site is located in an urbanized area 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.

f) Conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, Ch.22.104)? ☐ ☐ ☐ ☒

No Impact. The project site is relatively flat and is not located within a Hillside Management Area (25 percent or greater), according to Figure 9.8, Hillside Management Areas and Ridgeline Management Map, of the Los Angeles County 2035 General Plan. Therefore, no impact would occur.

g) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ☐ ☐ ☐ ☒

No Impact. A significant impact would occur if excavation or construction activities associated with the proposed project would disturb a unique paleontological resource, paleontological site, or a 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 within an urban area and on a site that has been previously disturbed. Construction of the proposed project would not involve deep levels of excavation and the likelihood of encountering previously uncovered paleontological resources is extremely low. Any project-related excavation is not expected to disturb any undiscovered paleontological resources. Therefore, no impact would occur.

8. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Generate greenhouse gas (GHGs) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Less-Than-Significant Impact. 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.[14] In addition to CO_2, CH_4, and N_2O, GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), 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 allows 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.[15] 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.[16] For the purposes of this environmental assessment, the interim Tier III screening threshold value of 3,000 metric

[14] California Environmental Protection Agency Climate Action Team, *Climate Action Report to Governor Schwarzenegger and the California Legislator*, March 2006.

[15] South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

[16] South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15*, September 28, 2010, http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf?sfvrsn=2, accessed June 16, 2021.

tons of CO_2e (MTCO2e) per year is the most appropriate comparison value for impacts determination based on the commercial 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 vehicular travel, 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.

Table 4 presents the estimated GHG emissions that would be released to the atmosphere on an annual basis by the proposed project. Construction of the proposed project would produce approximately 1,260.3 $MTCO_2e$ or 42.0 $MTCO_2e$ annually over a 30-year period. The total annual operating emissions would be approximately 767.2 $MTCO_2e$ per year after accounting for amortized construction emissions. This mass rate is substantially below the most applicable quantitative draft interim threshold of 3,000 $MTCO_2e$ per year recommended by SCAQMD to capture 90 percent of CEQA projects within its jurisdiction. Therefore, impacts would be less than significant.

TABLE 4: PROPOSED PROJECT ANNUAL GREENHOUSE GAS EMISSIONS	
Scenario and Emission Source	**Carbon Dioxide Equivalent (Metric Tons per Year)**
Construction Emissions Amortized (Direct) /a/	42.0
Area Source Emissions (Direct)	<0.1
Energy Source Emissions (Indirect)	442.9
Mobile Source Emissions (Direct)	255.4
Waste Disposal Emissions (Indirect)	22.0
Water Distribution Emissions (Indirect)	4.9
TOTAL	**767.2**
SCAQMD Draft Interim Significance Threshold	3,000
Exceed Threshold?	**No**
/a/ Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span. **SOURCE**: SCAQMD, CalEEMod version 2020.4.0; TAHA, 2021.	

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

Less-Than-Significant Impact. Assembly Bill (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.[17]

[17] *Center for Biological Diversity v. California Department of Fish and Game (2015)* 62 CAl.4th 204, 259.

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 (SCS) by metropolitan planning organizations. The California legislature passed SB 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare an SCS in their regional transportation plans to achieve the per capita GHG reduction targets. For the SCAG region, the SCS is contained in the Connect SoCal Plan. The Connect SoCal Plan focuses the majority of new job growth in high-quality transit areas and other opportunity areas on existing main streets, in downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. 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 (VMT) and VMT reductions as a significance threshold metric. The project site is located within one-half mile of an existing major transit stop and within a Transit Priority Area as it is situated approximately 0.42 miles from the Willowbrook/Rosa Parks Station, which is served by Metro A (Blue) and C (Green) light rail lines and is also directly served by several bus lines via off-street bus loading bays. Since the project site is within one-half mile of an existing major transit stop along an existing high quality transit corridor and is a part of a mixed-use transit-oriented district specific plan, the proposed project would not have the potential to conflict with the regional GHG emissions targets and VMT reduction efforts of SB 375 and SB 743, respectively.

With regards to local climate planning initiatives, the County adopted a 2020 CCAP to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11 percent below 2010 levels by 2020. The 2020 CCAP was adopted as part of the Air Quality Element of the Los Angeles County General Plan 2035 on October 6, 2015. The County Board of Supervisors adopted the CCAP Implementation Ordinance 2017 on June 6, 2018, which amended Title 22 of the Los Angeles County Code to allow the Los Angeles County Department of Regional Planning to implement the CCAP.

The proposed project would be consistent with the CCAP GHG reduction strategies by achieving LEED Gold equivalent level, complying with the California Building Code (Title 24), including CalGreen, and complying with the County's Stormwater and Runoff Pollution Control Ordinance. CalGreen lays out minimum requirements for newly constructed buildings in California, which would reduce GHG emissions through improved efficiency and process improvements. It requires builders to install plumbing that cuts indoor water use by as much as 20 percent, to divert 50 percent of construction waste from landfills to recycling, and to use low-pollutant paints, carpets, and floors. By complying with Title 24, the proposed project would also be consistent with the Air Quality Element of the Los Angeles County General Plan 2035. In addition, project-specific sustainable elements may potentially include, but are not limited to, photovoltaic panels on the roof, below-grade filtration tanks to collect and treat stormwater runoff and wastewater, building systems that employ a mix of passive and energy-efficient active strategies, locally sourced structural and finish materials that may include recycled content, and classrooms that take advantage of natural light and daylighting strategies to promote energy-efficiency. The proposed project would not conflict with applicable plans, policies, and regulations associated with the reduction of GHG emissions. Therefore, a less-than-significant impact is expected.

9. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?	☐	☐	☒	☐

Less-Than-Significant Impact. The proposed project would involve the limited use and storage of common hazardous substances, such as cleaning supplies, pesticides, and other landscaping supplies. 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 transport, use, or disposal. Any hazardous materials, substances, or wastes that are stored, generated, or used on the project site would be handled or disposed of in compliance with all existing regulations. Hazardous materials that would be used by the proposed project would be disposed of at the appropriate landfills that accept those types of waste. Therefore, the proposed project is not expected to create a significant hazard to the public or environment through the routine transport, storage, production, use, or disposal of hazardous materials. Impacts would be less than significant.

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

Less-Than-Significant Impact with Mitigation Incorporated. As discussed above in Response to Checklist Question 9a, operations of the proposed project would involve the limited use and storage of hazardous materials. All hazardous materials within the project site would be handled, used, stored, transported, and disposed of in accordance with all applicable federal, state, and local requirements.

Construction of the proposed project would involve the limited use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. According to the Phase II Subsurface Investigation Report, soil samples collected on the project site had detected total petroleum hydrocarbons (TPH) and VOCs at concentration levels that were below environmental screening levels for these contaminants. With the exception of lead, the collected soil samples detected Title 22 heavy metals that were below 10 times the soluble threshold limit concentration and below 20 times the toxicity characteristic leaching procedure levels. Lead was detected at concentration that range from 8.45 milligrams per kilogram (mg/kg) and 152 mg/kg. Since one sample on the project site has lead concentrations greater than 100 mg/kg, an SCAQMD Rule 1466 permit would be required prior to excavation or soil disturbance activities on the project site. The permit requires SCAQMD notification prior to soil disturbance and that dust levels be monitored at all times during disturbance. The soil samples collected for the Phase II Subsurface Investigation Report detected methane at concentrations that were less than 5,000 parts per million. The source of methane is unknown as the project site is not located near a landfill or an active, abandoned, or idle oil or gas well. As lead concentrations is greater than 100 mg/kg and methane was detected on the project site, the Phase II recommends a Soil Management Plan be completed prior to initiating soil disturbance and removal activities, which would protect worker health and safety during construction.

The Phase II also determined the presence of contaminated materials on the adjacent APLA Health Clinic site. Contaminated soils found at the APLA Health Clinic site include lead to a depth of three feet and VOCs.

During construction, approximately three feet of contaminated fill material would be replaced on-site. As soils on the project site and the adjacent APLA Health Clinic site is contaminated, construction on the project site has the potential to expose construction workers to lead and methane. Therefore, Mitigation Measure **HM-1** would require the preparation of a Soil Management Plan prior to soil disturbance activities. The Soil Management Plan would include measures, such as soil vapor monitoring and methane monitoring, that the County would require the applicant and construction contractor to implement during soil disturbance activities. Therefore, impacts related to the creation of hazards to the public or environment through the release of hazardous materials into the environment would be less than significant with mitigation incorporated.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ☐ ☒ ☐ ☐

Less-Than-Significant Impact with Mitigation Incorporated. The proposed project would be located on a school property, and two schools (King Drew Magnet High School of Medicine and Science and Abraham Lincoln Elementary School) are within a quarter-mile of the proposed project. As discussed above in Response to Checklist Questions 9a and 9b, the proposed project would use a limited amount of hazardous materials, and any hazardous materials used by the proposed project would be acquired, handled, used, stored, transported, and disposed of in accordance with all applicable federal, state, and local requirements. Lead and methane have the potential to be encountered during construction. With implementation of Mitigation Measure **HM-1**, the potential handling of hazardous materials and/or release of hazardous emissions would not pose a significant risk to nearby schools. Therefore, impacts would be less than significant with mitigation incorporated.

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

Less-Than-Significant Impact. A regulatory agency records search conducted as part of the Phase I Environmental Site Assessment for the CDU campus found that that the CDU campus, which includes the project site, is listed in four databases. The listings are identified in **Table 5**. The CDU campus also operates equipment that follows SCAQMD rules. The CDU campus has an active permit with SCAQMD to operate a diesel-fueled electric generator over 500 horsepower. None of the regulatory agency databases identify the presence or likely presence of any hazardous substances or petroleum products on the CDU campus that have been released to the environment, are under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.

TABLE 5: HAZARDOUS MATERIALS DATABASE LISTINGS FOR CDU CAMPUS		
Facility Name and ID	**Address**	**Database Findings**
CDU Life Sciences Research & Education Building WDID ID: 419C352115	1748 E. 118th St.	CA CIWQS Effective Date: 06/02/2008 Termination Date 09/02/2010
Drew Post Graduate School Facility ID: 007826-108284	1674 E. 118th St. (CDU historic address)	CA Los Angeles County HMS Permit Number: 00008834C Permit Status: Closed
Charles Drew University Facility ID: 032109-051116	1748 E. 118th St.	CA Los Angeles County HMS Permit Numbers: 000593861, 000593862
LAUSD/King Drew Medical Magnet High School GEPAID: CAD982353518	1601 E. 120th St. (current address) 1750 E. 118th St. (historic address)	CA Haznet Disposal of Waste Laboratory Chemicals in 2006 and 2008
Charles R. Drew Postgraduate Medical School Facility ID: 008341-108903	1621 E. 120th St. (Building F)	Listed as RCRA Large Quantity Generator in 1986 and 1996
Notes: CA CIWQS = California Integrated Water Quality System; CA Los Angeles County HMS = California Los Angeles County Hazardous Materials System; RCRA = Resource Conservation and Recovery Act **SOURCE**: Clark Seif Clark, Inc., 2018.		

The regulatory agency databases listed 12 facilities within 0.25 mile of the CDU campus, of which seven are within 0.25 mile of the project site (**Table 6)**. None of the properties have known contaminant releases to the subsurface of the properties that would result in a determination that the properties have the presence or likely presence of hazardous substances or petroleum products that have been released to the environment, are under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.

TABLE 6: HAZARDOUS MATERIALS DATABASE LISTINGS WITHIN 0.25 MILE OF PROJECT SITE			
Facility Name	**Address**	**Findings**	**Distance from Project Site**
Los Angeles County Fire Station #041	1815 E. 120th St.	Operates a permitted UST; no known releases	1,010 feet east
Augustus F. Hawkins Mental Health Center	1720 E. 120th St.	RCRA Large Quantity Generator of hazardous wastes; no reports of any violations during the previous 3 years	225 feet southeast
Fellowship Garden of Love	11754 Holmes Ave.	Lead remediation	1,010 feet northeast
King/Drew Medical Magnet High School	1601 E. 120th St.	RCRA Large Quantity Generator of hazardous wastes; no reports of any violations during the previous 3 years	20 feet west
Martin Luther King Hospital	12012 Compton Blvd., 12021 S. Wilmington Ave.	RCRA Small Quantity Generator; permitted UST operator; no known releases	490 feet southeast
Martin Luther King Jr. Outpatient Center & Hospital	1670 E. 120th St., 12021 Wilmington Ave.	Listed in multiple databases; LUST site; case closed 1996	300 feet south
Hooper Texaco Service, Hooper Shell Station, Brooks Texaco, Texaco Downstream, Hooper Texaco Service	11913 S. Compton Blvd.	Outside the area of concern for a release of petroleum hydrocarbons – approximately 700 feet downgradient of site; Active LUST facility – groundwater impacted; current tenant is Shell	580 feet west
Notes: LUST = leaking underground storage tank; RCRA = Resource Conservation and Recovery Act; SLIC = Spills, Leaks, Investigation, and Cleanup; UST = underground storage tank **SOURCE**: Clark Seif Clark, Inc., 2018; TAHA, 2022.			

The Los Angeles County Public Works Environmental Programs Division online database, which includes records related to industrial waste, underground storage tanks, and stormwater permits for unincorporated areas of Los Angeles County and 77 cities, has records for the following facilities within 0.25 mile of the project site:

- Cobb Building Café – associated with an industrial waste discharge permit for a public restaurant; records did not identify any hazardous materials in the waste stream.
- 1748 East 118th Street – associated with inspections of the stormwater interceptor in the delivery driveway and the sampling box for the laboratories as required under the County's MS4 permit. A notice of violation was issued due to sludge and solids collected in the interceptor that required removal.
- 1674 E. 118th Street – records on file for a closed permit.

The project site and facilities within 0.25 mile of the project site are not listed in the following databases:

- State Water Resource Control Board's GeoTracker online database
- California Department of Toxic Substances Control's EnviroStor online database
- California Department of Conservation, Division of Oil, Gas and Geothermal Resources' Wellfinder database
- Los Angeles County Public Works Building and Safety Division online database

The records search did not find any known releases of hazardous materials for and within 0.25 mile of the project site.[18] Thus, the proposed project would not create a significant hazard to the public or the environment and a less-than-significant impact is expected.

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?	☐	☐	☐	☒

No Impact. 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 the Compton/Woodley Airport, which is approximately 2.3 miles south of the project site. Therefore, the proposed project would not result in an airport- or airstrip-related safety hazard for people residing or working in the area, and no impact would occur.

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

No Impact. The project site is not along an emergency route. According to the Los Angeles County General Plan Safety Element, the I-105 freeway is the nearest disaster route and is approximately 0.25 mile north of the project site.[19] No lane or street closures would occur during construction or operation of the proposed project and, thus, the proposed project would not impede public access to emergency/disaster routes and would not interfere with an adopted emergency response plan or emergency evacuation plan. Emergency vehicle access would be maintained at all times during construction and operation of the proposed project in

[18] Clark Seif Clark, Inc., *Phase I Environmental Site Assessment*, July 5, 2018.
[19] Los Angeles County Department of Regional Planning, *Los Angeles County General Plan 2035, Chapter 12 Safety Element Figure 12.6 Disaster Routes Map*, 2015.

compliance with the requirements of Los Angeles County Fire Department (LACFD). Therefore, no impacts related to emergency response or emergency evacuation plans are expected.

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

No Impact. The project site is not located in a fire hazard severity zone, as identified by Los Angeles County and the California Department of Forestry and Fire Protection (CalFire), and the proposed project would not require any brush clearing, vegetation management, or fuel modification for this zone.[20, 21] The project site is located in an urbanized area of the County and is not located within or adjacent to a wildland area. The proposed project would not involve activities that would expose people or structures to the risk of loss, injury, or death involving wildland fires. Therefore, no impacts related to the exposure of people or structures to wildland fire would occur.

MITIGATION MEASURES

HM-1 The applicant shall prepare and complete a Soil Management Plan prior to initiating soil disturbance and removal activities. To be protective of worker health and safety and potential public exposures to VOC vapors, the Soil Management Plan shall include soil vapor monitoring, including methane monitoring, during soil disturbance activities. The measures contained within the Soil Management Plan shall be implemented during all activities that involve soil disturbance. The Soil Management Plan shall be submitted to the Los Angeles County Fire Department Health Hazardous Materials Division (HHMD) for review and approval during the building permit application phase. The applicant shall also incorporate any necessary features to meet applicable standards, to the satisfaction of HHMD. HHMD shall oversee the implementation of the Soil Management Plan at the project site.

[20] Los Angeles County Department of Regional Planning, *Los Angeles County General Plan 2035, Chapter 12 Safety Element Figure 12.5 Fire Hazard Severity Zone Policy Map*, 2015.
[21] California Department of Forestry and Fire Protection, *California Fire Hazard Severity Zone Viewer*, https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414, accessed March 2021.

10. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐

Less-Than-Significant Impact. A significant impact would occur if discharges associated with the proposed project would create pollution, contamination, or nuisance as defined in Section 13050 of the California Water Code (CWC) or violate regulatory standards as defined in the applicable National Pollutant Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for the receiving water body.

During construction, surface water quality could potentially be affected by runoff of loose soils and/or a variety of construction wastes and fuels that could be carried off-site by surface runoff or into local storm drains that drain into water resources. However, the proposed project would be required to comply with all federal, state, and local regulations related to water quality standards and wastewater discharge. Construction contractors would be required to comply with all provisions of the NPDES General Construction Activity Permit, which is issued by the State Water Resource Control Board and enforced by the County. The General Construction Activity Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) prior to the beginning of construction for construction activities that disturb one or more acres of soil. The proposed project would be required to prepare an SWPPP and implement Best Management Practices (BMPs) that are required by the Los Angeles County Department of Public Works as part of the County's NPDES permit. Compliance with these requirements would reduce the risk of water degradation from soil erosion and other pollutants related to construction activities. The proposed project would not violate any water quality standards or waste discharge requirements during construction.

The proposed project would be required to incorporate and implement the County's LID standards and the requirements of the County's Municipal Separate Storm Sewer System (MS4) permit to control and minimize potentially polluted runoff. The proposed project is required to comply with these requirements in order to obtain construction permits and certificates of occupancy from the County. Additionally, the proposed project would comply with the requirements of the Willowbrook Transit Oriented District (TOD) Specific Plan. As discussed in Section 3.7 (Hydrology and Water Quality) of the Willowbrook TOD Specific Plan Final Environmental Impact Report (EIR), development projects that are implemented in accordance with the Willowbrook TOD Specific Plan would not violate water quality standards or waste discharge requirements. As such, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. Impacts related to water quality standards and waste discharge requirements would be less than significant.

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

Less-Than-Significant Impact. The Geotechnical Engineering Investigation for the project site and the adjacent APLU Health Center site identified groundwater at a depth of approximately 19 feet below the

existing grade on the project site.[22] During construction, the proposed project would involve some site grading, and excavation would be limited to three feet below the existing surface. Excavation activities would be limited to removing the existing fill material. Excavation activities are not expected to encounter potable aquifer water. Following construction of the proposed project, soil absorption rates would not be significantly altered as the amount of impervious surface area would remain roughly the same as or less than existing conditions. The proposed project would not require the direct addition or withdrawal of groundwater and would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Additionally, as discussed in Section 3.7 (Hydrology and Water Quality) of the Willowbrook TOD Specific Plan Final EIR, water purveyors that serve the Willowbrook TOD Specific Plan area have pumping rights to obtain groundwater from the Central Groundwater Basin. Because groundwater withdrawls from the Central Groundwater Basin are limited based on the adjudication, compliance with the judgement that set pumping rights would eliminate the potential for water agencies that serve the Specific Plan area, including the project site, to substantially impact the groundwater aquifer. As the proposed project would comply with the requirements of the Willowbrook TOD Specific Plan, impacts related to groundwater supplies and recharge would be less than significant.

The project site is not currently used for groundwater recharge activities, would not install any groundwater wells, and would not otherwise directly withdraw any groundwater during construction or operations of the proposed project. As discussed in Section 3.7 (Hydrology and Water Quality) of the Willowbrook TOD Specific Plan Final EIR, the Central Groundwater Basin is recharged mainly by stormwater, imported water, and reclaimed water along the upper reaches of the San Gabriel River and the Rio Hondo via the San Gabriel River Water Conservation System., which is located several miles away from the project site. Therefore, the proposed project would not reduce the groundwater recharge potential of the Central Groundwater Basin, and a less-than-significant impact would occur.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of a Federal 100-year flood hazard area or County Capital Flood floodplain; 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?	☐	☒	☐	☐

Less-Than-Significant Impact with Mitigation Incorporated. No streams or rivers are located in the vicinity of the project site. Existing surface water drainage from the project site generally flows towards the south. The proposed project would not alter existing drainage patterns in a manner that would result in erosion or flooding or increase stormwater runoff that would likely exceed existing storm drain capacity or increase pollutants in stormwater runoff. During construction, on-site soils would temporarily be 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. It would also be required to implement BMPs from the County Department of Public Works. Compliance with construction-related BMPs would limit any potential surface water runoff in order to control and minimize erosion and siltation.

Upon completion of the proposed project, the project site would continue to be covered with a similar amount of impervious surfaces and drainage patterns would continue to be similar to existing conditions. The proposed project would be required to comply with the County's LID standards (County of Los Angeles Code of Ordinance Title 12, Chapter 12.84) to reduce the effects of stormwater runoff from development and to reduce erosion. Mitigation Measure **HW-1** would require the applicant to implement stormwater quality

[22] Geotechnologies, Inc., *Geotechnical Engineering Investigation: Proposed CDU and APLA Health Unit*, October 30, 2019.

control measures to ensure that the proposed project complies with the County's LID standards. Mitigation Measure **HW-2** would require the applicant to prepare a hydrology study to show that the proposed development would not increase stormwater runoff from existing conditions. Therefore, the proposed project would not substantially alter the existing drainage pattern of the project site in a manner that would result in substantial soil erosion or siltation. Impacts related to erosion or siltation would be less than significant with implementation of mitigation measures.

(ii) Substantially increase the rate, amount, or depth of surface runoff in a manner which would result in flooding on- or offsite?	☐	☒	☐	☐

Less-Than-Significant Impact with Mitigation Incorporated. The proposed project does not involve any construction activities that would alter existing drainage patterns on the project site, and drainage patterns on the project site would continue to remain similar to existing conditions during operations of the proposed project. Additionally, the project site would continue to be covered with a similar amount of impervious surfaces as existing conditions.

Runoff from the project site currently discharges to existing storm drains in the surrounding streets. During proposed project operations, stormwater runoff would continue to be directed into existing storm drains that currently receive surface water runoff from the project site. The amount of stormwater runoff from the project site is expected to be similar to the existing conditions. The proposed project would be required to comply with the County's LID standards. Mitigation Measure **HW-1** would require the applicant to implement stormwater quality control measures to ensure that the proposed project complies with the County's LID standards. Mitigation Measure **HW-2** would require the applicant to prepare a hydrology study to show that the proposed development would not increase stormwater runoff from existing conditions. These mitigation measures would ensure that the proposed project would not affect the existing drainage pattern in a manner that would result in on- or off-site flooding. Therefore, impacts would be less than significant with implementation of mitigation measures.

(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?	☐	☒	☐	☐

Less-Than-Significant Impact with Mitigation Incorporated. As discussed in Response to Checklist Questions 10c.i and 10c.ii, the proposed project would not alter existing drainage patterns and would not increase the amount of stormwater runoff compared to existing conditions. The proposed project would, therefore, not increase runoff water so as to exceed the capacity of existing or planned stormwater drainage systems.

With regards to polluted runoff, the proposed project would be required to comply with all federal, state, and local regulations related to water quality standards and wastewater discharge, including construction-related BMPs from the County Department of Public Works to limit the amount of polluted runoff that would enter the stormwater drainage system. Compliance with applicable regulations and policies, including the construction-related BMPs from the County Department of Public Works, would ensure that impacts related to the capacity of the City's existing storm drain system, the generation of polluted runoff, impede or redirection of runoff would be less than significant during construction. Furthermore, operations of the proposed project would not require the alteration of the existing drainage system or installation of a new drainage system. The amount of stormwater runoff that enters the existing stormwater drainage system would be similar to existing conditions, and the proposed project would be required to comply with the County's LID standards. Mitigation Measure **HW-1** would require the applicant to implement stormwater quality control measures to ensure that the proposed project complies with the County's LID standards. Mitigation

Measure **HW-2** would require the applicant to prepare a hydrology study to show that the proposed development would not increase stormwater runoff from existing conditions. These mitigation measures would ensure that the proposed project would not increase stormwater runoff from existing conditions. Therefore, impacts related to exceeding existing storm drain capacities or polluted runoff would be less than significant with implementation of mitigation measures.

(iv) Impede or redirect flood flows which would expose existing housing or other insurable structures in a Federal 100-year flood hazard area or County Capital Flood floodplain to a significant risk of loss or damage involving flooding?	☐	☐	☐	☒

No 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 designated as Zone X (Area of Minimal Flood Hazard) by the Federal Management Agency (FEMA) and, thus is not subject to flooding from the 100-year or 500-year flood.[23] It is also not located on a County Capital Flood floodplain (i.e., 50-year flood hazard area).[24] With implementation of the proposed project, drainage patterns, the amount of runoff, and the amount of impervious surfaces would remain similar existing conditions. As discussed in Response to Checklist Questions 10a and 10c.i, the proposed project would be required to comply with construction-related BMPs from the County Department of Public Works. Compliance with construction-related BMPs from the County Department of Public Works would control and limit the amount of runoff that would enter the stormwater drainage system during construction activities. The proposed project would not alter the project site's drainage patterns in a manner that would impede or redirect flood flows. Therefore, impacts related to the alteration of drainage patterns that would impede or redirect flood flows would be less than significant.

d) Otherwise place structures in Federal 100-year flood hazard or County Capital Flood floodplain areas which would require additional flood proofing and flood insurance requirements?	☐	☐	☐	☒

No Impact. As discussed in Response to Checklist Question 10c.iv, the project site is not located within 100-year flood hazard or County Capital Flood floodplain areas. Therefore, flood proofing and flood insurance would not be required for the proposed project, and no impact would occur.

e) Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)?	☐	☒	☐	☐

Less Than Significant Impact with Mitigation Incorporated. With implementation of the proposed project, drainage patterns, the amount of runoff, and the amount of impervious surfaces would remain similar to existing conditions. Construction and operation of the proposed project would be required to comply with the County Department of Public Works Construction Site BMPs Manual, which would minimize stormwater runoff, pollutant loadings from impervious surfaces, erosion, and other impacts on drainage systems. In addition, the proposed project would implement the County's LID standards. Mitigation Measure **HW-1** would require the applicant to implement stormwater quality control measures to ensure that the proposed project complies with the County's LID standards. This mitigation measure would ensure that the proposed

[23] Federal Emergency Management Agency, *Flood Hazard Map Service Center*, https://msc.fema.gov/portal/search?AddressQuery=1731%20e%20120th%20st%2C%20los%20angeles#searchresultsanchor, accessed March 2021.
[24] Los Angeles County Department of Public Works, *Flood Zone Determination Website*, https://pw.lacounty.gov/floodzone/, accessed March 2021.

project would not conflict with the County's LID Ordinance. Therefore, impacts would be less than significant with implementation of mitigation measure.

f) Use onsite wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)? ☐ ☐ ☐ ☒

No Impact. The proposed project would connect to and utilize existing Los Angeles County wastewater collection and treatment system. Although the proposed project is considering the installation of below-grade filtration tanks to collect and treat stormwater runoff and wastewater, no streams, lakes, or drainage courses are located near the project site. The proposed project is considering the installation of below-grade filtration tanks to collect and treat stormwater runoff and wastewater as a sustainable element to achieve LEED Gold equivalent level. The potential installation of below-grade filtration tanks is not expected to reach close to the groundwater levels below the project site, which has been identified at a depth of approximately 19 feet below the existing grade on the project site.[25] Therefore, no impact would occur.

g) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? ☐ ☐ ☐ ☒

No Impact. A tsunami is a sea wave produced by a significant undersea disturbance. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, or lake. The project site is located approximately 10 miles east of the Pacific Ocean and is not within a coastal zone or tsunami inundation area. Additionally, the project site is not located near a body of water that is large enough to create a seiche during a seismic event.

As discussed in Response to Checklist Question 10c.iv, the project site is not subject to flooding from a County Capital, 100-year, or 500-year flood. With implementation of the proposed project, drainage patterns and the amount of impervious surfaces would remain similar to existing conditions. The project site is relatively flat and is not located within a flood hazard zone. Therefore, no impact would occur.

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

Less-Than-Significant Impact. A significant impact would occur if the proposed project would conflict with or obstructs implementation of a water quality control plan or sustainable groundwater management plan, which would occur if the proposed project discharged water that does not meet the quality standards of agencies that regulate surface water quality and water discharge into storm water drainage systems or did not comply with all applicable regulations as governed by the Regional Water Quality Control Board. The project site is located in the Los Angeles River watershed, which is regulated by the Los Angeles Regional Water Quality Control Board (LARWQCB). Water quality standards for the Los Angeles region, including the Los Angeles River watershed, are set forth in the Water Quality Control Plan: Los Angeles Region Basin Plan (Basin Plan), which was last updated in 2014. The Basin Plan establishes water quality objectives to protect the valuable uses of surface waters and groundwater within the Los Angeles region. Under Section 303(d) of the Clean Water Act, the Basin Plan is intended to protect surface waters and groundwater from both point and nonpoint sources of pollution within the Los Angeles region and identifies water quality standards and objectives that protect the beneficial uses of various waters. In order to meet the water quality objectives established in the Basin Plan, LARWQCB established total maximum daily loads, which are implemented

[25] Geotechnologies, Inc., *Geotechnical Engineering Investigation: Proposed CDU and APLA Health Unit*, October 30, 2019.

through stormwater permits. As discussed in Response to Checklist Question 10a, the proposed project would be required to comply with applicable regulations associated with water quality, construction-related BMPs that are part of the County's NPDES permit, the County's LID standards, and requirements of the County's MS4 permit. Compliance with these regulations would ensure that the proposed project would be consistent with the Basin Plan.

The project site lies in the Coastal Plain of Los Angeles – Central Groundwater Basin. The Sustainable Groundwater Management Act requires local public agencies and groundwater sustainability agencies in high- and medium-priority basins to develop and implement groundwater sustainability plans (GSPs) or alternatives GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability. The project site is located in a very low-priority basin and, to date, no sustainable groundwater management plan has been developed for this groundwater basin.[26] The proposed project would comply with all applicable regulations associated with surface water quality, and the proposed project would not conflict with or obstruct implementation of the Basin Plan. Therefore, impacts related to water quality control plans or sustainable groundwater management plans would be less than significant.

MITIGATION MEASURES

HW-1 The applicant shall implement stormwater quality control measures that are consistent with the County's LID standards (County of Los Angeles Code of Ordinance Title 12, Chapter 12.84) to reduce stormwater runoff. The measures shall be reviewed and approved by the Los Angeles County Public Works Department during the building permit application phase.

HW-2 The applicant shall prepare a hydrology study to show that the proposed development will not increase stormwater runoff from existing conditions. The hydrology study shall be submitted to the Los Angeles County Public Works Department for review and approval during the building permit application phase.

[26] California Department of Water Resources, *SGMA Basin Prioritization Dashboard*, https://gis.water.ca.gov/app/bp-dashboard/final/, accessed March 2021.

11. LAND USE AND PLANNING

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒

No Impact. A significant impact would occur if the proposed project were sufficiently large or configured in such a way that would create a physical barrier within an established community. The proposed project would construct a five-story building and a student-oriented central courtyard on the CDU campus. A parking structure would be constructed at the existing CDU parking facility on 118th Street to accommodate the proposed project. A new driveway approach would be constructed on 117th Street to allow for the continued use of the parking facility during construction. Upon completion of construction, the driveway approach on 117th Street would remain, and the parking facility would have entrances on 117th Street and 118th Street. The central courtyard would link the proposed building to the existing CDU campus, and the existing access road on the west side of the project site would be maintained. It would continue to provide access and support to the project site, the multi-family residential complex north of the project site, and King Drew Magnet High School of Medicine and Science west of the project site. The proposed project does not include any features that would physically divide the community. No street closures would result with implementation of the proposed project, and the proposed project would not block access to or through the community. Pedestrian access would be maintained on the sidewalks along the public roads surrounding the project site. Access to all uses would not be disrupted. Therefore, no impact would occur.

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

Less-Than-Significant Impact. A significant impact would occur if the proposed project conflicts with the Willowbrook TOD Specific Plan in a manner that would result in a significant environmental impact. The project site is zoned Specific Plan (SP) and is located within the Drew Educational Specific Plan Zone of the Willowbrook TOD Specific Plan area. The proposed project would be required to comply with the development standards contained within the Drew Educational Specific Plan Zone, including but not limited to height limit, setback, FAR, landscaping, and parking requirements. As discussed in Response to Checklist Question 1c, the proposed project would exceed the maximum allowable FAR of 1.5 for the Drew Educational Specific Plan Zone and would require the Los Angeles County Department of Regional Planning approval to construct a building that would have an FAR of 2.15. Upon approval from the Los Angeles County Department of Regional Planning to increase its FAR from 1.5 to 2.15, the proposed project would not conflict with applicable regulations. The increase in FAR to 2.15 would be consistent with the 2.5 FAR for the Martin Luther King, Jr. Medical Campus south of the project site and, as discussed in this Initial Study, is not expected to result in a significant environmental impact. Therefore, with Los Angeles County Department of Regional Planning approval of the proposed FAR increase, impacts related to plans, policies, and zoning designations would be less than significant.

c) Conflict with the goals and policies of the General Plan related to Hillside Management Areas or Significant Ecological Areas?	☐	☐	☐	☒

No Impact. Hillside Management Areas (HMAs) are defined as areas with 25 percent or greater natural slopes. The project site is not located within a Hillside Management Area.[27] As discussed in Response to Checklist Question 4f, the project site is not located within an SEA. Therefore, no impact would occur.

[27]County of Los Angeles Department of Regional Planning, *GIS-Net Public*, https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public, accessed June 2021.

12. MINERAL RESOURCES

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

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. According to the California Department of Conservation Generalized Mineral Land Classification Map, the project site is located in an area where no significant mineral deposits are present.[28] Additionally, the Mineral Resources map from the County's General Plan Conservation and Natural Resources Element does not identify the project site as being located within a Mineral Resource Zone or an area with oil and gas resources.[29] The project site is not located near any oil fields, and no oil extraction and/or quarry activities have historically occurred on or are presently conducted on the project site. The proposed project does not involve any mineral, oil, or gas extracting activities. Therefore, the proposed project would not result in the loss of availability of any known regionally valuable or locally important mineral resource, and no impact would occur.

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

No Impact. See Response to Checklist Question 12a.

[28] California Department of Conservation, *Generalized Mineral Land Classification of Los Angeles County – South Half*, 1994.
[29] Los Angeles County, *Los Angeles County General Plan 2035*, *Chapter 9 Conservation and Natural Resources Element Figure 9.6 Mineral Resource*s, 2015.

13. NOISE

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

Less-Than-Significant Impact. 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.

This noise analysis discusses sound levels in terms of Community Noise Equivalent Level (CNEL) and Equivalent Noise Level (Leq). 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 p.m. and 10:00 p.m. is as if the sound were 5 dBA higher than if it occurred from 7:00 a.m. to 7:00 p.m. From 10:00 p.m. to 7:00 a.m., 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 p.m. to 10:00 p.m. and 10 dBA to sound levels in the night from 10:00 p.m. to 7:00 a.m. Because CNEL accounts for human sensitivity to sound, the CNEL is always a higher number than the actual 24-hour average. Leq is the average noise level on an energy basis for any specific time period. The Leq for one hour is the average energy noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. Leq can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise 10level is expressed in units of dBA.

Summary of Applicable Noise Regulations/Standards

The Noise Ordinance for the County (Chapter 12.08 of the Los Angeles County Municipal Code) establishes noise standards to control unnecessary, excessive, and annoying noise and vibration in the County. Section 12.08.440 of the Noise Ordinance prohibits the operation of any tools or equipment used between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, that creates a noise disturbance across a residential or commercial real-property line. The only exceptions would be emergency work or public safety projects (Section 12.08.0570, part 5, exemption H, Public Health and Safety Activities) or by variance issued by the health officer. Section 12.08.440 of the Noise Ordinance establishes working hours and maximum levels of equipment noise that are allowable from both mobile and stationary equipment at affected uses in the County, as shown in **Table 7**.

TABLE 7: LOS ANGELES COUNTY CONSTRUCITON NOISE LIMITS (in dBA)			
Allowable Work Dates & Hours	**Single-Family Residential**	**Multi-Family Residential**	**Semi-Residential/ Commercial**
MOBILE EQUIPMENT (LESS THAN 10 DAYS OF EQUIPMENT OPERATION)			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75	80	85
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60	65	70
STATIONARY EQUIPMENT (MORE THAN 10 DAYS OF EQUIPMENT OPERATION)			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60	65	70
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50	55	60
SOURCE: Los Angeles County Municipal Code, *Section 12.08.440 Construction Noise*, 1978.			

Section 12.08.390 of the Los Angeles County Noise Ordinance regulates operational noise with allowable noise limits within designated noise zones. The exterior standards are shown in **Table 8**. The Noise Ordinance also states that should the existing ambient noise level exceed the exterior noise standards, then the measured noise level shall become the new exterior noise standards.

TABLE 8: LOS ANGELES COUNTY EXTERIOR NOISE STANDARDS							
Noise Zone	**Land Use**	**Time**	**Exceed 30 min/hr**	**Exceed 15 min/hr**	**Exceed 5 min/hr**	**Exceed 1 min/hr**	**Exceed at any time**
I	Noise Sensitive	Anytime	45	50	65	60	65
II	Residential	10:00 p.m. to 7:00 a.m.	45	50	65	60	65
		7:00 a.m. to 10:00 p.m.	50	55	70	65	70
III	Commercial	10:00 p.m. to 7:00 a.m.	55	60	75	70	75
		7:00 a.m. to 10:00 p.m.	60	65	80	75	80
IV	Industrial	Anytime	70	75	90	85	90
SOURCE: Los Angeles County Municipal Code, *Section 12.08.390 Exterior Noise Standards*, 1978.							

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:

- King Drew Magnet High School located approximately 50 feet to the west of the proposed HPEB;
- Residences located approximately 50 feet to the northeast of the proposed parking structure on 118th Street;
- Residences located approximately 120 feet to the east of the proposed parking structure on 118th Street;
- Residences approximately 120 feet to the northwest of the proposed HPEB;
- Residences approximately 220 feet to the northeast of the proposed parking structure on 118th Street;

- Residences approximately 280 feet to the east of the proposed parking structure on 118th Street;
- Augustus F. Hawkins Mental Health Center approximately 300 feet to the southeast of the proposed HPEB; and
- Martin Luther King, Jr. Community Hospital approximately 400 feet to the south of the proposed HPEB.

To characterize the existing noise environment around the project site, short-term noise measurements were taken using a SoundPro DL Sound Level Meter on Friday, March 26, 2021, between 10:30 a.m. and 12:30 p.m. Short-term noise levels range from 53.7 to 67.4 dBA L_{eq}. Existing noise levels at the noise monitoring locations are shown in **Table 9**.

TABLE 9: EXISTING AMBIENT NOISE LEVELS (SHORT TERM MEASUREMENT)

Noise Monitoring Location	Sound Level (dBA, L_{eq})
East 120th St. and Healthy Wy. (Hospital)	63.6
1601 East 120th St. (King Drew Magnet High School)	58.3
1629 East 118th Pl. #49 (Residence)	53.7
11815 Compton Ave. (Residence)	67.4
1667 E. 118th Pl. (School)	58.5
Noise monitoring information can be found in Appendix B. **SOURCE**: TAHA, 2021.	

Construction Noise Levels

The proposed project would be constructed in a manner typical of urban infill projects and would not require unusually noisy activities, such as pile driving. In addition, the proposed project would not require nighttime construction activities. Consistent with County Municipal Code Section 12.08.440, construction would occur between 7:00 a.m. to 7:00 p.m., which is designed to control noise exposure.

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. The most noise-intensive construction activities would occur during the early phases of construction (e.g., demolition, site preparation, and grading) as these construction phases would mostly occur outdoors. The majority of the latter phases of construction would occur within the newly constructed building, which would result in lower noise levels than exterior construction.

Typical noise levels from various types of equipment that may be used during each construction phase are shown in **Table 10**. Construction activities typically require the use of numerous pieces of noise-generating equipment. The noise levels shown in **Table 10** takes into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected for each phase of construction. When considered as an entire process with multiple pieces of equipment, demolition activity would generate the loudest noise level (approximately 84.2 dBA L_{eq} at 50 feet).

TABLE 10: 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	**84.2**
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	**83.2**
BUILDING CONSTRUCTION	
Crane	72.6
Generator	77.6
Gradall	79.4
Backhoe	73.6
Welder	70.0
Building Construction Combined	**82.9**
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.	

The proposed project would implement the following elements during construction:

- Power construction equipment would be equipped with noise shielding and muffling devices (consistent with manufacturers' standards).
- All equipment would be property maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.
- Temporary noise barriers (e.g., plywood structures or flexible sound control curtains) extending eight feet in height would be erected around the northern and western perimeter of the construction area for the proposed HPEB and around the easterly end of the construction area for the proposed parking structure.
- When possible, on-site electrical sources would be used to power equipment rather than diesel generators.

- Equipment would be turned off when not in use for more than five minutes, except for equipment that requires idling to maintain performance.
- Construction staging areas would be located away from residences and King Drew Magnet High School.
- Construction activities whose specific location on the project site may be flexible (e.g., operation of compressors and generators) would be conducted as far away as possible from residences and King Drew Magnet High School.
- A "noise disturbance coordinator" would be established and would be responsible for responding to local complaints about construction noise. The noise disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to residential units within 500 feet of the construction site and all signs posted at the construction site would list the telephone number for the noise disturbance coordinator.

These elements would reduce construction noise levels at nearby sensitive receptors. Specifically, the use of noise shielding and muffling devices on power construction equipment would reduce engine noise, causing noise generated by these equipment to be reduced by at least 5 dBA..[30] The temporary noise barriers would reduce the noise during construction at nearby residences and at the King Drew Magnet High School by at least 10 decibels.

Table 11 presents the estimated noise levels at the sensitive receptors nearest to the project site with incorporation of the noise reducing elements listed above. As shown, construction noise levels would be below the County construction noise limits. Therefore, the proposed project would result in a less-than-significant impact related to construction noise. with implementation of the above noise-reducing features.

TABLE 11: CONSTRUCTION NOISE LEVELS

Sensitive Receptors	Distance to Construction (Feet)	Existing Ambient Noise Level (dBA, L_{eq})	Construction Noise Level at 50 ft (dBA, L_{eq})	Construction Noise Level at Sensitive Receptor (dBA, L_{eq})	County Noise Limit	Exceed Limit?
HPEB						
King Drew Magnet High School to the west	50	58.3	69.2	69.2	70	No
Residences to the northwest	120	53.7	69.2	61.6	65	No
Augustus F. Hawkins Mental Health Center to the southeast	300	63.6	79.2	63.6	70	No
Martin Luther King, Jr. Community Hospital to the south	400	63.6	79.2	61.1	70	No
Residences to the west	590	67.4	79.2	48.8	60	No
PROPOSED PARKING STRUCTURE						
Residences to the northeast along E. 117th St.	50	67.4	64.2	64.2	65	No
Residences to the east along E. 118th St.	120	60.4	64.2	56.6	65	No
Residences to the northeast along E. 117th St.	220	67.4	64.2	46.8	60	No
Residences to the east along E. 118th St.	280	60.4	64.2	44.7	65	No
Noise level calculations can be found in Appendix B. **SOURCE**: TAHA, 2021.						

[30]USEPA, *Noise from Construction Equipment and Operation*s, *Building Equipment and Home Appliances*, *Page* 3, PB 206717, 1971

Operation Noise

Table 12 presents existing ambient noise levels for sensitive receptors near HPEB and the proposed parking structure, with County daytime noise standards. Based on Section 12.08.390 of the Noise Ordinance, the applicable noise standards for commercial and residential receptor properties are 60 dBA and 50 dBA, respectively, during the daytime hours of 7:00 a.m. to 10:00 p.m. The use of both HPEB and the proposed parking structure would primarily occur during daytime hours and, therefore, only daytime standards would be applicable. This section of the County Noise Ordinance also states that should the existing ambient noise level exceed their exterior noise standard, then the measured noise level shall become their new exterior noise standard. **Table 12** presents a comparison of measured ambient noise levels to the County Noise Ordinance's exterior noise standards to determine if the ambient noise level should become the new exterior noise standard.

TABLE 12: OPERATIONAL NOISE – LA COUNTY DAYTIME NOISE STANDARDS

Sensitive Receptors	Distance to Construction (Feet)	Use	Existing Ambient Noise Level (dBA, L_{eq})	County Daytime Noise Standards Based on Use	Use Ambient Noise Level as Exterior Noise Standard?
HPEB					
King Drew Magnet High School to the west	50	Noise Sensitive	58.3	50	**Yes**
Residences to the northwest	120	Residential	53.7	50	**Yes**
Augustus F. Hawkins Mental Health Center to the southeast	300	Commercial	63.6	60	**Yes**
Martin Luther King, Jr. Community Hospital to the south	400	Commercial	63.6	60	**Yes**
Residences to the west	590	Residential	67.4	50	**Yes**
PROPOSED PARKING STRUCTURE					
Residences to the northeast along E. 117th St.	50	Residential	67.4	50	**Yes**
Residences to the east along E. 118th St.	120	Residential	60.4	50	**Yes**
Residences to the northeast along E. 117th St.	220	Residential	67.4	50	**Yes**
Residences to the east along E. 118th St.	280	Residential	60.4	50	**Yes**

SOURCE: TAHA, 2021.

Stationary Noise Sources

Heating, Ventilation, and Air Conditioning (HVAC). The proposed HPEB would include several stationary sources of noise typical of commercial developments. Heating, ventilation, and air conditioning (HVAC) systems may generate unwanted noise in the project vicinity. HVAC equipment without muffling or enclosures typically generates a noise level of approximately 60 dBA at 50 feet. HVAC equipment for the proposed project would be located on the fifth floor of the proposed HPEB. The mechanical equipment for the proposed project would be placed on the roof behind parapet walls, which would reduce HVAC noise levels by 10 dBA or more, resulting in a noise level of approximately 50 dBA at 50 feet.

Table 13 presents anticipated HVAC equipment noise levels at each nearby sensitive receptor. Noise levels were assessed using Soundplan Essential Version 4.0, which is a noise modeling software that uses acoustical algorithms to calculate noise levels based on distance from source to receiver, type of source, and other variables. Estimated HVAC equipment noise at the HPEB would not exceed exterior noise standards at any nearby sensitive receptors. At the nearest sensitive receptor (King Drew High School), the estimated HVAC equipment noise level is 14.4 dBA below the existing ambient noise level, and 16.1 dBA below the exterior noise standard for the receptor's use. HVAC noise generated by the proposed project would not change the existing noise

environment and traffic noise would remain the dominant noise source. Therefore, the proposed project would result in a less-than-significant impact related to HVAC equipment noise.

TABLE 13: OPERATIONAL NOISE – HVAC EQUIPMENT NOISE LEVEL				
Sensitive Receptor	**Existing Ambient Noise Level (dBA, L_{eq})**	**HVAC Equipment Noise Level (dBA, L_{eq})**	**Exterior Noise Standards (dBA)**	**Exceed Exterior Noise Standard?**
King Drew Magnet High School to the west	58.3	43.9	58.3	No
Residences to the northwest	53.7	38.0	53.7	No
Augustus F. Hawkins Mental Health Center to the southeast	63.6	36.4	63.6	No
Martin Luther King, Jr. Community Hospital to the south	63.6	37.3	63.6	No
Residences to the west	67.4	33.4	67.4	No
Residences to the east along E. 118th St.	60.4	31.0	60.4	No
SOURCE: TAHA, 2021.				

Outdoor Gathering Spaces. The proposed HPEB includes ground floor and fifth floor outdoor gathering spaces that may produce stationary operational noise related to human speech. The ground floor includes an outdoor classroom amphitheater and an outdoor café seating area. The fifth floor contains two outdoor rooftop terraces with seating areas for students and faculty to gather. In social situations, people often talk at a distance of approximately 3 to 13 feet. A typical normal voice level of one person speaking at this distance is approximately 57.8 dBA L_{eq}.[31]

Based on the site plans, the ground floor outdoor classroom amphitheater and outdoor café seating area are anticipated to have 10 people speaking at a time for each space. The rooftop main terrace is anticipated to have 15 people speaking at a time. Facility users are anticipated to be dispersed throughout each area and would not present a single concentrated noise source. Furthermore, although approximate allowable occupancy for each area would be higher, it is not expected to be fully occupied at all times and every person in these gathering spaces would not speak at the same time and, thus, would not generate higher levels of conversational noise.

Noise levels generated by the three outdoor gathering spaces were assessed using Soundplan Essential Version 4.0, which is a noise modeling software that uses acoustical algorithms to calculate noise levels based on distance from source to receiver, type of source, and other variables. Predicted outdoor area noise levels are shown in **Table 14** by sensitive receptor. Noise levels generated by the outdoor gathering spaces are not anticipated to be audible above the existing ambient noise levels at each sensitive receptor. The existing ambient noise levels along 120th Street and Compton Avenue are 63.6 dBA and 67.4 dBA, respectively, which are well above the anticipated conversational noise level that would be received at each sensitive receptor (approximately 26.3 dBA or less dependent on the receptor). Conversational noise generated by the proposed project would not change the existing noise environment and traffic noise would remain the dominant noise source. Outdoor gathering space noise would not exceed the exterior noise standards. Therefore, the proposed project would result in a less-than-significant impact related to outdoor gathering space noise.

[31]Soundplan Essential 4.0.

TABLE 14: OPERATIONAL NOISE – OUTDOOR CONVERSATIONAL NOISE LEVEL				
Sensitive Receptor	**Existing Ambient (dBA, L_{eq})**	**Outdoor Noise Level (dBA, L_{eq}) /a,b/**	**Exterior Noise Standards (dBA)**	**Exceed Exterior Noise Standard?**
King Drew Magnet High School to the west	58.3	0.0 /c/	58.3	No
Residences to the northwest	53.7	22.3	53.7	No
Augustus F. Hawkins Mental Health Center to the southeast	63.6	26.3	63.6	No
Martin Luther King, Jr. Community Hospital to the south	63.6	22.9	63.6	No
Residences to the west	67.4	0.0 /c/	67.4	No
Residences to the east along E. 118th St.	60.4	20.0	60.4	No
/a/ Takes into account expected noise received by the ground floor cafe seating area, ground floor amphitheater, and rooftop terrace. /b/ Noise level calculated using Soundplan. /c/ Soundplan had indicated that outdoor operational noise would not contribute to noise levels at sensitive receptor. **SOURCE**: TAHA, 2021.				

Parking. Parking activity would also be a source of noise. Currently, the southern half of the existing parking facility on 118th Street, northeast of the proposed HPEB, is an outdoor surface parking lot while the northern half of the parking facility is a three-story parking structure. With implementation of the proposed project, this existing parking facility would extend the existing parking structure on the north side of the parking facility over to the existing surface parking lot on the south side of the parking facility to accommodate additional parking needs. The proposed parking structure would allocate 8 parking spaces for the proposed HPEB. Additionally, new entrance to the parking lot would be built along East 117th Street and would remain open throughout regular operations.

To the east of the proposed parking structure are primarily multi-family residences. In accordance with Section 12.08.390 of the County Noise Ordinance, the existing ambient noise levels of 67.4 dBA L_{eq} and 60.4 dBA L_{eq} at the residences on 117th Street[32] and 118th Street, respectively, are used as their respective operational noise thresholds.

Sources of noise from the proposed parking structure would include engines accelerating, doors slamming, car alarms, and people talking. It is anticipated that vehicle speeds at the proposed parking structure would not exceed 10 miles per hour. 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.[33] The noise level was adjusted using guidance provided by the Federal Transit Administration Transit Noise and Vibration Impact Assessment guidance and a maximum peak hour volume of 29 trips per hour, as estimated for the proposed project. The resultant noise level at 50 feet would be approximately 41.0 dBA L_{eq}. **Table 15** presents anticipated parking activity noise levels. Parking activity noise levels received at each sensitive receptor would be less than the existing noise levels of 60.4 dBA and 67.4 dBA found at 118th Street, and 117th Street, respectively, and would not exceed the exterior noise thresholds. Furthermore, noise levels from the proposed parking structure would be similar to the noise levels generated by the existing parking facility. Therefore, the proposed project would result in a less-than-significant impact related to parking noise.

[32] A noise measurement was not taken on East 117th Street, but the measurement on Compton Avenue (67.4 dBA L_{eq}) would be similar to the existing noise level along East 117th Street due to proximity of the freeway.
[33] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

TABLE 15: OPERATIONAL NOISE – PARKING ACTIVITY					
Sensitive Receptor	**Distance (Feet)**	**Existing Ambient Noise Level (dBA, L_{eq})**	**Parking Activity Noise Level (dBA, L_{eq})**	**Exterior Noise Standards (dBA)**	**Exceed Exterior Noise Standard? (dBA, Leq)**
Residences to the northeast along E. 117th St.	50	67.4	41.0	67.4	No
Residences to the east along E. 118th St.	120	60.4	33.4	60.4	No
Residences to the northeast along E. 117th St.	220	67.4	23.6	67.4	No
Residences to the east along E. 118th St.	280	60.4	21.5	60.4	No
SOURCE: TAHA, 2021.					

Combined Stationary Source Noise Analysis. During operation of the proposed project, the various stationary noise sources (HVAC noise, outdoor area noise, and parking activity noise) may combine to result in a higher noise level than produced alone. The use of both the HPEB and the proposed parking structure would primarily occur during the daytime and, therefore, only daytime standards would be applicable. Combined stationary source noise levels are shown in **Table 16**. As shown in the table, the daytime exterior noise standards at each sensitive receptor would not be exceeded by combined stationary source noises. Therefore, the proposed project would result in a less-than-significant impact related to combined stationary source noise.

TABLE 16: COMBINED STATIONARY SOURCE NOISE LEVELS								
Sensitive Receptor	HVAC Equipment Noise Level (dBA, Leq) /a/	Outdoor Area Noise Level (dBA, L_{eq}) /a/	Parking Activity Noise Level (dBA, L_{eq}) /a/	Combined Noise Level (dBA, L_{eq})	County Standard		Exceed Standard?	
					Day	Night /b/	Day	Night /b/
HPEB								
King Drew Magnet High School to the west	43.9	0.0	0.0	43.9	60.0	N/A	No	N/A
Residences to the northwest	38.0	22.3	0.0	38.1	53.7	N/A	No	N/A
Augustus F. Hawkins Mental Health Center to the southeast	36.4	26.3	0.0	36.9	63.6	N/A	No	N/A
Martin Luther King Jr. Community Hospital to the south	37.3	22.9	0.0	37.5	63.6	N/A	No	N/A
Residences to the West	33.4	0.0	0.0	33.4	67.4	N/A	No	N/A
PROPOSED PARKING STRUCTURE								
Residences to the northeast along E. 117th St.	0.0	0.0	41.0	41.0	67.4	N/A	No	N/A
Residences to the east along E. 118th St. closest to the proposed project	31.0	0.0	33.4	35.4	60.4	N/A	No	N/A
Residences to the northeast along E. 117th St.	0.0	0.0	23.6	23.7	67.4	N/A	No	N/A
Residences to the east along E. 118th St.	0.0	0.0	21.5	21.6	60.4	N/A	No	N/A

/a/ The reference distance for each noise source is different depending on the distance between the noise source and the noise receptor.
/b/ The proposed project would be operated during daytime hours and therefore only daytime standards would be applicable.
N/A = Not applicable
Noise level calculations can be found in Appendix B.
SOURCE: TAHA, 2021.

Vehicle Noise Sources on Roadways

The proposed project is anticipated to add 299 net daily trips to the local street system during weekdays, with 28 AM peak hour trips and 29 PM peak hour trips. Mobile noise was calculated using TNM 2.5 for existing conditions and existing plus project conditions. The proposed project's AM peak hour trips were added to the existing AM peak hour trips and the difference was calculated. **Table 17** shows modeled noise levels for existing conditions and existing conditions plus proposed project roadway noise levels for local roadways. **Table 18** shows modeled noise levels for the proposed project's opening year with and without the proposed project measured in dBA CNEL. The addition of project-related trips would result in a 0.1 to 0.3 dBA CNEL increase over existing conditions. During the opening year a maximum increase of 0.3 dBA CNEL would occur at 118th Street. Roadway noise increase attributed to the proposed project would be less than 3 dBA on the local roadway network and is not anticipated to result in a perceptible change in sound level for a person with normal hearing sensitivity or result in a 5 dBA CNEL or more increase. Therefore, the proposed project would result in a less-than-significant impact related to vehicle noise on roadways.

TABLE 17: ESTIMATED MOBILE SOURCE NOISE LEVELS (EXISTING CONDITIONS)

	Estimated Noise Levels (dBA, CNEL)		
Roadway Segment	**Existing Conditions**	**Existing Conditions plus Project**	**Change**
Compton Ave. north of 118th St.	59.2	59.2	0.0
Compton Ave. between 118th St. and 120th St.	59.2	59.2	0.0
Wilmington Ave. north of 118th St.	61.2	61.2	0.0
Wilmington Ave. between 118th St. and 120th St.	61.0	61.0	0.0
118th St. east of Compton Ave.	49.7	50.0	0.3
118th St. west of Wilmington Ave.	51.5	51.6	0.1
120th St. east of Compton Ave.	60.4	60.4	0.0
120th St. west of Wilmington Ave.	59.2	59.2	0.0

Noise level calculations can be found in Appendix B.
SOURCE: TAHA, 2021.

TABLE 18: ESTIMATED MOBILE SOURCE NOISE LEVELS (OPENING YEAR 2023)

	Estimated Noise Levels (dBA, CNEL)		
Roadway Segment	**Opening Year No Project (2023)**	**Opening Year with Project (2023)**	**Change**
Compton Ave. north of 118th St.	59.2	59.2	0.0
Compton Ave. between 118th St. and 120th St.	59.2	59.3	0.1
Wilmington Ave. north of 118th St.	61.2	61.2	0.0
Wilmington Ave. between 118th St. and 120th St.	61.0	61.0	0.0
118th St. east of Compton Ave.	49.8	50.1	0.3
118th St. west of Wilmington Ave.	51.6	51.7	0.1
120th St. east of Compton Ave.	60.4	60.4	0.0
120th St. west of Wilmington Ave.	59.2	59.2	0.0

Noise level calculations can be found in Appendix B.
SOURCE: TAHA, 2021.

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?	☐	☐	☐	☒

No Impact. As discussed in Response to Checklist Question 9e, the project site is not located within an airport land use plan and is approximately 2.3 miles away from the Compton/Woodley Airport, and the proposed project would not expose people residing or working in the area to excessive aircraft noise. No impact related to excessive airport noise would occur.

14. POPULATION AND HOUSING

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

Less-Than-Significant Impact. A potentially 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 does not include new housing and does not involve the extension of roads or other infrastructure. The proposed project would develop a five-story HPEB that would accommodate an additional 240 students and 25 new employees. No student housing is currently located on the CDU campus and the proposed project does not include any housing. CDU is a commuter school where approximately 70 percent of existing CDU students are from Los Angeles County and 15 percent are from the surrounding south Los Angeles area. While many of the future students and employees that may be generated as a result of the proposed project may already live in the surrounding area, some of the additional students and employees that would be generated from the new program may come from outside of the surrounding area or the broader Los Angeles County region. Some of the increase in student population may be temporary (i.e., students move to the area to attend school and would leave the area after finishing school), while other students may decide to stay in the area after completing their education program at CDU. With regards to the additional jobs generated by the proposed project, it is likely that the jobs would be filled to some extent by employees already residing in the vicinity of the project site or within Los Angeles County. However, it is possible that some of these jobs (e.g., faculty) would be filled by persons moving into the surrounding area or the broader Los Angeles County. As a result, the proposed project may induce some population growth from the increase in staff and students.

Between 2020 and 2030, SCAG forecasts population to increase by approximately 2,870 persons in the unincorporated Willowbrook community.[34] If all of the new students and employees are conservatively assumed to move from outside of the community, the increase in 265 people would still be within the SCAG population growth projections. The proposed project would be generally consistent with the nature of CDU and would not induce population growth beyond those that are already forecasted for the unincorporated Willowbrook community. As such, it is unlikely that the proposed project would induce substantial unplanned growth in the surrounding area.

If the additional students and employees generated by the proposed project were to move into the surrounding area, housing demand associated with the proposed project could increase. Nevertheless, it is anticipated that some of the demand would be filled by existing vacancies in the housing market and some from other new units in nearby developments. Therefore, given that the proposed project would not directly contribute to population growth in the area, the proposed project would not result in a notable increase in demand for new housing. Furthermore, as the project site is in a highly developed area with an established network of roads and the urban infrastructure, it would not require the extension of such infrastructure in a manner that would

[34] Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*, April 2016.

indirectly induce substantial population growth. Therefore, the proposed project would not induce substantial population or housing growth, and impacts related to population growth would be less than significant.

While construction of the proposed project would create temporary construction-related jobs, the work requirements of most construction projects are highly specialized so that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Accordingly, construction workers associated with the proposed project would not be anticipated to relocate their household's place of residence as a consequence of working on the proposed project and, therefore, no new permanent residents are anticipated as a result of proposed project construction.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact. The project site is currently developed with two modular buildings that are used for offices, maintenance, facilities support, security, and other administration support for CDU. No housing is currently located on the project site and implementation of the proposed project would not result in the displacement of people or housing. Therefore, no impact on displacement would occur.

15. PUBLIC SERVICES

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

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. Fire protection and emergency services for the project site are provided by the Los Angeles County Fire Department (LACFD) Station 41, located at 1815 East 120th Street, approximately 0.2 mile east of the project site.

Construction of the proposed project may generate traffic associated with the movement of construction equipment, removal of demolition materials and excavated soils, and construction worker trips. Although slow-moving construction-related vehicles, such as haul trucks, may be present along streets, such as 120th Street, emergency vehicles would be able to circumvent these slow-moving construction-related vehicles using sirens during emergencies. Previous construction activities on the CDU campus involved closing the north lane of 120th Street and utilizing the two-way left turn lane as a travel lane. Prior to construction, the County requires that the applicant prepare and submit a construction traffic management plan that addresses construction-related traffic and emergency access issues. Flag persons and/or detours would be provided as needed, and construction signs would be posted to advise motorists of reduced construction zone speed limits. The construction traffic management plan would provide measures to ensure that emergency vehicle access along 118th and 120th Streets are maintained and that access to LSCFD Station 41 and the Martin Luther King, Jr. Medical Campus is not restricted. The construction traffic management plan would be reviewed by the County to ensure that construction activities would not impede traffic and emergency access. The construction traffic management plan would ensure that any potential lane closures would not affect fire protection services. Therefore, emergency access would remain available along all surrounding streets.

Although the proposed project does not have a residential component, the proposed project would increase daytime population (through employees and students), which could increase demand on fire protection services. However, given that the proposed project serves an existing urban area with institutional, commercial, and residential uses, and given the project site's proximity to Fire Station 41, fire protection services to the project site is not expected to result in the need for new or physically expanded fire services in order to maintain acceptable response times, or other performance objectives.

Prior to construction of the proposed project, a plot plan and emergency evacuation plan would be submitted to LACFD for review. The proposed project would be required to implement all LACFD requirements and adhere to all relevant local and state requirements regarding fire safety. The project applicant would also be required to submit a fire safety plan, which verifies that LACFD requirements relative to access, fire flow, sprinklers, and evacuation plans have been satisfied. Compliance with LACFD requirements, as well as all

relevant local and state requirements, would ensure that the proposed project would not increase demand on fire protection services in a manner that would adversely affect LACFD service ratios, response times, or other performance objectives. Therefore, the proposed project would not result in a need for new or expanded fire protection facilities in order to provide adequate fire protection services. Impacts associated with fire protection services would be less than significant.

Sheriff protection? ☐ ☐ ☒ ☐

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 sheriff 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. Sheriff protection services to the project site are provided by the Los Angeles County Sheriff Department Century Station, located at 11703 South Alameda Street in the City of Lynwood, approximately 0.9 mile east of the project site. In addition to the Century Station, CDU has a campus security program that provides security and campus safety officers on the campus.

As with fire protection services, slow-moving construction-related vehicles, such as haul trucks, may be present along streets, such as 120th Street. Sheriff vehicles would be able to circumvent these slow-moving construction-related vehicles using police sirens during emergencies. Additionally, the perimeter of the construction area would be fenced during construction. The County would require the applicant to prepare and submit a construction traffic management plan that addresses construction-related traffic and emergency access issues. The construction traffic management plan would be reviewed by the County to ensure that any potential lane closures during construction would not affect sheriff protection services. Emergency access would remain available along all surrounding streets.

Once constructed, sheriff protection services from the County Sheriff Department Century Station would be supplemented by the CDU campus security program, similar to existing conditions. The CDU campus security program includes full-time security officers, campus safety officers, marked emergency evacuation routes, emergency call boxes, and security cameras. CDU campus security would reduce demand for sheriff services, the need to deploy additional officers, and/or increased patrols within the vicinity of the project site. As a result, the proposed project is not anticipated to increase sheriff protection services in a manner that would cause the County Sheriff Department to construct a new sheriff station or expand the existing Century Station to maintain its level of service. Any potential increase in sheriff protection services would be met by the campus security and safety officers, along with deployment of additional officers from Century Station and/or increased patrols within the project site vicinity. The proposed project would not result in a need for new or expanded law enforcement facilities in order to provide adequate sheriff protection services. Therefore, impacts associated with sheriff protection services would be less than significant.

Schools? ☐ ☐ ☒ ☐

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 project site is located within the Compton Unified School District (CUSD) boundaries. The proposed project does not include any residential uses and would not result in direct generation of school-age students. While some future CDU students and employees may have school-aged children who attend CSUD or other nearby school districts (such as Los Angeles Unified School District), the number is expected to be negligible. Thus, the proposed project would not induce substantial population growth in a manner that would potentially increase student population at schools within the surrounding community. Nonetheless, pursuant to Section 65995 of the Government Code, the applicant for the proposed project would be charged impact fees to construct or reconstruct school facilities. Section 65995(h) of the California Government Code states that the payment of statutory fees "...is

deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Therefore, impacts associated with school facilities would be less than significant.

Parks? ☐ ☐ ☒ ☐

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. The proposed project would construct a new HPEB on the existing CDU campus and a student-oriented central courtyard. It does not propose any residential uses. The proposed courtyard would provide students with an on-site open space area that serve the CDU student population. As discussed in Response to Question 14a, the proposed project would not induce substantial population growth and, consequently, would not contribute to a noticeable increase in demand on park and recreational facility. The proposed project would not accelerate the deterioration of existing parks and would not require the construction of additional or the expansion of existing recreational facilities. Therefore, impacts related to parks would be less than significant.

Libraries? ☐ ☐ ☒ ☐

Less-Than-Significant Impact. A significant impact would occur if the proposed project would result in substantial population growth resulting in the need for and/or the provision of new or physically altered libraries, the construction of which would cause significant environmental impacts. The proposed project would be located on the existing CDU campus, which is served by the on-campus CDU library. As discussed in Response to Checklist Question 14a, no residential uses are proposed, and the proposed project is not expected to cause an influx of people to move to the area. As the proposed project would be served by the CDU library and would not induce substantial population growth, the proposed project would not contribute to a noticeable increase in demand for existing public library facilities and would not require the construction of a new or expansion of an existing public library facility. Therefore, impacts to libraries would be less than significant.

Other public facilities? ☐ ☐ ☒ ☐

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 public roads, transit, and utilities, 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. See Response to Checklist Questions 17a and 17b for a discussion of project-related demand on roads and transit. See Response to Checklist Question 19a for a discussion of project-related demand on utilities. As discussed, the proposed project would not require the construction of new or physically altered roads, transit services, and utilities. Therefore, impacts to other public facilities would be less than significant.

16. RECREATION

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Less-Than-Significant Impact. As discussed in Response to Checklist Question 3.15a (Parks), the proposed project would construct a new HPEB, a student-oriented central courtyard, and a parking structure. It does not propose any residential uses. The proposed courtyard would provide students with an on-site open space area that serve the CDU student population. As discussed in Response to Checklist Question 14a, the proposed project would not induce substantial population or employment growth and, consequently, would not accelerate the deterioration of existing parks and would not require the construction of additional or the expansion of existing recreational facilities. Therefore, a less-than-significant impact is anticipated.

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?	☐	☐	☒	☐

Less-Than-Significant Impact. The proposed project would construct a student-oriented central courtyard. The environmental effects associated with the proposed courtyard are evaluated as part of the proposed project in this Initial Study and is not expected to result in an adverse physical effect on the environment. As discussed in Response to Checklist Questions 15a (Parks) and 16a, the proposed project would not induce substantial population or employment growth and, consequently, would not accelerate the deterioration of existing parks and would not require the construction of additional or the expansion of existing recreational facilities. Therefore, impacts on recreational facilities would be less than significant.

c) Would the project interfere with regional trail connectivity?	☐	☐	☐	☒

No Impact. Due to the location of the proposed project within and urbanized area and that no regional trails are located within the vicinity of the project site, the proposed project would not interfere with regional trail connectivity. Therefore, no impact would occur.

17. TRANSPORTATION

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐

Less-Than-Significant Impact. A significant impact would occur if the proposed project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The project site is governed by the Willowbrook TOD Specific Plan and the Los Angeles County Bicycle Master Plan.

Willowbrook TOD Specific Plan

The Willowbrook TOD Specific Plan is intended to facilitate the transformation of the area around the Metro Willowbrook/Rosa Parks Station into a vibrant TOD, while strengthening its connections to the adjacent residential neighborhoods and the rest of the Willowbrook community. The Specific Plan aims to improve access to all modes of transportation, including transit, walking, and bicycling. The Specific Plan establishes zoning for parcels within the Specific Plan boundary, two of which are mixed-use zones to facilitate integrated commercial and residential development through optimal site planning and efficient use of land and to promote walking, bicycling, recreation, transit use, and community reinvestment. These mixed-use zones are situated north of 118th Street and east of Wilmington Avenue. The parking facility that would be expanded as part of the proposed project is located in one of the mixed-use zones, while the proposed HPEB would be located in the Drew Educational Specific Plan Zone.

The Specific Plan includes mobility strategies for the roadway network in the Specific Plan area, as well as for improving pedestrian, bicycle, and transit circulation. The overall goal for the Specific Plan area is to enhance connectivity and the ease of movements for non-automobile transportation modes, particularly pedestrians and bicyclists. One of the street enhancements identified in the Specific Plan, which has already been implemented, is to reduce the number of lanes on 120th Street between Compton Avenue and Wilmington Avenue from four to three lanes in each direction and to have no on-street parking. The Specific Plan also identifies 120th Street throughout the Specific Plan Area and 118th Street between Compton Avenue and Wilmington Avenue as key pedestrian routes. The Compton Avenue/118th Street and Compton Avenue/120th Street intersects are the nearest intersections to the project site where the Specific Plan proposes pedestrian-oriented intersection improvements, such as providing high visibility crosswalks, passive pedestrian detection and pedestrian push buttons for crosswalks, pedestrian countdown and audio signals, and advance stop lines to signalized intersection approaches. The proposed project does not include any components that would conflict with the circulation policies and actions contained within the Willowbrook TOD Specific Plan. The proposed project would not alter or change the lane configurations or roadway designations of any roadways. Additionally, the Class II bike lane along 120th Street and the sidewalks along 120th Street and 118th Street would continue to serve the project site and its surrounding area. The proposed project would not conflict with or preclude the transportation improvements identified in the Specific Plan.

The Specific Plan Programmatic Environmental Impact Report (EIR) included CDU with 49 multi-family housing units and 625 total students with 477,842 square feet of building space in the existing conditions, and 119 multi-family housing units and 1,450 students in 772,990 square feet of building space under future conditions, which would result in a net change of 70 multi-family dwelling units, 825 students, and 295,148

square feet of building space. Using the factors from the ITE Trip Generation 9th Edition, trip generation estimates were developed for the CDU Master Plan with adjustment factors appropriate for the CDU campus and a TOD area. The CDU portion of the Specific Plan was forecasted to generate 125 a.m. peak hour trips (4 percent of total Specific Plan a.m. peak hour trips) and 126 p.m. peak hour trips (3 percent of total Specific Plan p.m. peak hour trips). The Transportation Impact Analysis prepared for the proposed project, which is provided in Appendix C of this Initial Study, estimates that the proposed project would generate 28 net new a.m. peak hour trips and, 29 net new p.m. peak hour trips. The estimated peak hour trips for the proposed project would be well below the peak hour trips estimated for the CDU campus in the Specific Plan Programmatic EIR.

Section 3.12 (Transportation and Traffic) of the Specific Plan Programmatic EIR evaluated potential Specific Plan-related impacts at 66 study intersections, ten freeway segments, and ten freeway off-ramps that provide local and regional access to the traffic study area and define the extent of the boundaries for this traffic impact analysis. Investigations at these key locations were used to evaluate potential traffic-related impacts associated with build out of the proposed Specific Plan. The section also provided mitigation measures, where feasible, that would reduce potential impacts from build out of the proposed Specific Plan to be implemented by site specific development applications within the Specific Plan area prior to issuance of a grading permit. Agencies that would monitor the implementation of these mitigation measures include the Los Angeles County Department of Regional Planning, City of Compton, City of Los Angeles, and Caltrans. The proposed project does not include components that would interfere with the implementation of the mitigation measures contained in the Specific Plan Programmatic EIR.

Los Angeles County Bicycle Master Plan
The Los Angeles County Bicycle Master Plan designates a countywide network of bicycle paths, bicycle lanes, and bicycle routes in the vicinity of the Specific Plan area. Within the vicinity of the project site, the Bicycle Master Plan proposes a Class II bike route on 120th Street between Central Avenue and Wilmington Avenue and a Class III bike route on 119th Street between Wilmington Avenue and Mona Boulevard. The Bicycle Master Plan also identifies 120th Street between Central Avenue and Wilmington Avenue as a bicycle boulevard. Class II bike lanes are currently present along this segment of 120th Street, and the proposed project would not interfere with the operations of the bicycle lanes in the vicinity of the project site.

Summary
In summary, the proposed project would not conflict with policies and plans addressing the circulation system, including those that involve alternative transportation modes. The existing sidewalks along 120th Street and 118th Street; bus stops in proximity to the project site along Compton Avenue, Wilmington Avenue, and 120th Street; and Class II bike lane along 120th Street currently serve the project site and would continue to serve the project site with implementation of the proposed project. The proposed project does not include components that would alter or limit access to these transportation facilities. Therefore, a less-than-significant impact would occur.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? ☐ ☐ ☒ ☐

Less-than-Significant Impact. A significant impact would occur if the proposed project would result in VMT that exceeds an applicable threshold of significance. As stated in CEQA Guidelines Section 15064.3(b)(1), land use projects that are within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor are generally presumed to cause a less-than-significant transportation impact. A major transit stop is defined by Public Resource Code Section 21064.3 as a site containing an existing rail transit station, a ferry terminal served by either a 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. Additionally, the Southern California Association of

Governments defines a Transit Priority Area (TPA) as an area within one-half mile of a major transit stop that is existing or planned, including an existing rail transit station or bus rapid transit station or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during AM and PM peak commute periods.

The project site is located within one-half mile of an existing major transit stop and within a TPA as it is situated approximately 0.42 miles from the Willowbrook-Rosa Parks Station, which is served by Metro A (Blue) and C (Green) light rail lines and is also directly served by several bus lines via off-street bus loading bays. Section 3.1.2.3 (Proximity to Transit Based Screening Criteria) of the Los Angeles County Public Works Transportation Impact Analysis Guidelines states that if a project is located near a major transit stop or high-quality transit corridor, no further analysis is required and a less-than-significant determination can be made if the answers to the following questions is no:

- Does the proposed project have an FAR less than 0.75?
- Does the proposed project provide more parking than required by the County Code?
- Is the proposed project inconsistent with the SCAG RTP/SCS?
- Does the proposed project replace residential units set aside for lower income households with a smaller number of market-rate residential units?

The proposed project would have an FAR of 2.15. A total of 73 parking spaces would be allocated to the proposed project from the existing surface parking lot at the northeast corner of Compton Avenue and from the parking facility on 118th Street (between the former Abraham Lincoln Elementary School and the Park Water Company Well 19C property). The Willowbrook TOD Specific Plan and TOD Parking Reduction Overlay Zone set the parking requirements contained in Chapter 22.112 of the County of Los Angeles Code of Ordinances as the maximum parking standards for non-residential uses. The minimum parking standard for non-residential uses in the Willowbrook TOD Specific Plan and TOD Parking Reduction Overlay Zone is 40 percent of the maximum requirement. The maximum parking requirement for the proposed project, as required by Chapter 22.112 of the County of Los Angeles Code of Ordinances, is 181 spaces.[35] At 40 percent of the maximum parking requirement, the minimum parking requirement for the proposed project would be 73 parking spaces. The parking facilities are on the CDU campus and are less than 600 feet from the project site. The parking spaces that would be allocated to the proposed project would not be more than the amount required by the Willowbrook TOD Specific Plan and the TOD Parking Reduction Overlay Zone. Additionally, the proposed project does not involve any components that would be inconsistent with the SCAG RTP/SCS. The proposed project is consistent with the growth projections that were used for the SCAG RTP/SCS. No residential units are located on the project site and the proposed project would not remove any residential units. The answers to the above question is no and, thus, the proposed project meets the Los Angeles County Public Works Proximity to Transit Based Screening Criteria. No further analysis is required, and, the proposed project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Impacts would be less than significant.

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

No Impact. A significant impact would occur if the proposed project would introduce design features or incompatible uses that would increase hazards. The proposed project would construct a new five-story HPEB

[35] Los Angeles County Code of Ordinances Section 22.112.070 requires schools grade 7 and up to provide one space per classroom and one space per five persons. Additionally, offices are required to provide one space per 400 square feet. As the proposed project would provide 3500 instructional seats in lecture halls, classrooms, and simulation rooms; 12 classrooms; 30 simulation rooms; and 27,550 square feet of offices and space for student-related uses (such as study rooms and student lounge areas), the proposed project would be required to provide 181 parking spaces. .

with a student-oriented central courtyard that would connect to the existing CDU campus. The design of the proposed building and courtyard would be consistent with the existing structures and open space areas on the CDU campus and its surrounding area.

The proposed project would not introduce incompatible uses or include the construction of any new roads or the modification of any existing roads or pedestrian pathways that would result in an increase in hazards. The existing surface parking lot at the northeast corner of Compton Avenue and 118th Street would allocate 65 parking spaces to the proposed project. In addition, the parking facility on 118th Street (between the former Abraham Lincoln Elementary School and the Park Water Company Well 19C property) would be expanded. This expansion would include structured parking over the existing surface parking lot and would connect to the existing three-level parking structure on the north side of the parking facility. While the proposed HPEB would be located along 120th Street, it is anticipated that students and employees accessing the proposed building would use the current and future CDU parking facilities along 118th Street. Driveway access would be designed to ensure no hazardous design features related to vehicle and pedestrian mobility (e.g., sharp curves and line-of-sight obstructions) are included. The proposed project does not include components that would not increase hazards. Therefore, no impact related to hazards associated with design features or incompatible uses would occur.

d) Result in inadequate emergency access? ☐ ☐ ☒ ☐

Less-than-Significant Impact. A significant impact would occur if the proposed project would result in inadequate emergency access. The proposed project is not located along a disaster route. LAFD Station 41 is located within the same block as the project site, approximately 0.2 mile east of the project site. Additionally, the Martin Luther King, Jr. Medical Campus is located on the south side of 120th Street, directly south of the project site. Access to the Martin Luther King, Jr. Community Hospital emergency department is located along 120th Street.

Vehicular access to the proposed HPEB is via 120th Street, and a new driveway approach to the parking facility on 118th Street would be created on 117th Street. The new driveway approach on 117th Street would allow access to the existing parking structure during construction and would remain operational after construction activities on the parking facility site are completed. The new driveway approach would be designed in compliance with Los Angeles County requirements. Students and employees of the proposed project would use 117th Street and 118th Street to access the CDU parking facilities. The proposed project would not alter 118th Street or 120th Street. Additionally, the proposed project would not alter the existing shared access road on the project site. Adequate emergency access would be provided to the project site, and emergency access to the surrounding uses would be maintained.

Although previous construction activities on the CDU campus involved closing the north lane of 120th Street and utilizing the two-way left turn lane as a travel lane, any temporary lane closures that may result from proposed project construction would be addressed with a construction traffic management plan to ensure that access is not restricted. Additionally, the proposed project plans would be reviewed by the LACFD and would be required to comply with the emergency access requirements of the LACFD. Therefore, impacts related to emergency access would be less than significant.

18. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k), or	☐	☐	☒	☐

Less-Than-Significant Impact. A significant impact would occur if the proposed project would cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources. The project site was previously disturbed and developed, and the proposed project would not include substantial excavation, so native soils would not be disturbed. To date, no significant tribal cultural resources have been identified on the project site. A Sacred Lands File records search was conducted through the Native American Heritage Commission to identify whether the agency has any records of tribal cultural resources on the project site. Results of the records search was negative, indicating that the agency does not have any records that tribal cultural resources exist on the project site.[36] Additionally, as discussed in Response to Checklist Question 5a, the SCCIC records search results indicate that the project site does not have any built environment resources, California Points of Historical Interest, California Historical Landmarks, California Register of Historical Resources, and National Register of Historic Places.[37] Additionally, the project site is not listed or eligible for listing in the Los Angeles County Register of Landmarks and Historic Districts. Nevertheless, the project site is located in an area that has a history of Native American occupation, and tribal resources could be present.

In accordance with AB 52 requirements, the County Department of Regional Planning notified the California Native American tribes that are traditionally and culturally affiliated with the geographic area of the project site on June 24, 2021. The Gabrieleno Band of Mission Indians - Kizh Nation (Tribe) responded to the consultation letter, and the County Department of Regional Planning met with the Tribe on October 28, 2021. As part of the tribal consultation, tribal representatives provided information regarding the Tribe's ancestral localities in the area surrounding the project site. Tribal representatives indicated that the project site is located in an area that is highly sensitive for tribal cultural resources due to its location near several trade routes, historical waterways, and tribal communities. Mitigation measures were provided by tribal representatives to avoid potentially significant effects on tribal cultural resources during grading/excavation activities. However, the mitigation measures were not included in this Initial Study because the project site is in an urbanized area, and the project site and its surrounding area have been disturbed by previous development. Historical aerial photographs reviewed as part of the Phase

[36] Native American Heritage Commission, *Re: Native American Tribal Consultation, Pursuant to the AB 52, Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Section 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Charles Drew University Health Professions Education Building Project, Los Angeles County*, December 21, 2021.
[37] South Central Information Center, *Re: Record Search Results for the Proposed Charles Drew University of Medicine and Science Health Professions Education Building at 1731 East 120th Street, Los Angeles*, August 20, 2021.

II Subsurface Investigation Report indicate that the project site and the surrounding area have been disturbed since the 1920s. In the 1920s, the project site and the surrounding area were developed with structures and agricultural operations that consists of fields and livestock. In the 1930s and 1940s, the project site and its surrounding area were developed with residential structures. Since the 1970s, the residential structures were demolished and structures associated with the CDU campus were constructed.

Construction of the proposed project would involve the removal of approximately three feet of fill material that was previously imported onto the project site. As discussed in Response to Checklist Question 9b, the fill material on the project site is contaminated and would be removed. Construction of the proposed project would not involve deep levels of excavation. Therefore, grading and excavation activities are not expected to disturb native soil and any undiscovered tribal cultural resources. A less-than-significant impact on tribal cultural resources would occur.

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

Less-Than-Significant Impact. See Response to Checklist Question 18a.

19. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

Less-Than-Significant Impact. A significant impact would occur if the proposed project would require or result in the relocation or construction of new or expanded utility infrastructure, the construction or relocation of which could cause significant environmental effects. As discussed below, the proposed project would not require the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications facilities. Therefore, less-than-significant impacts are expected.

Water

The County Department of Public Works operates and maintains the water system on the project site, and Liberty Utilities provides water service to the project site. The project site is in the Central Basin Municipal Water District (Central Basin) service area. According to the 2015 Urban Water Management Plan for the Central Basin, the Central Basin is projected to have a water surplus of 5,643 acre-feet (af) in 2025 and 6,498 in 2030 for an average year. For a single dry year, the Central Basin is projected to have a water surplus of 5,030 af in 2025 and 5,880 af in 2030. For multi-dry year, the Central Basin is projected to have a water surplus of 3,803 af in 2025 and 4,644 in 2030. The Central Basin would have sufficient water supply to meet its service area demands for normal, single-dry, and multiple-dry year conditions..[38]

The proposed project would result in an increased water demand of approximately 8.6 af per year, which represents approximately 0.2 percent of the Central Basin's water supply surplus..[39] Water consumption would likely be lower because the proposed project would be required to implement water conservation measures to comply with Los Angeles County Green Building Standards and Water Efficient Landscape Ordinance, such as the incorporation of low-flow fixtures and use of water efficient landscaping. In addition, the project applicant is required by the County Department of Public Works to provide a "will service" letter to ensure that sufficient water capacity is available to serve the proposed project's projected water demands. As a result, the proposed project is not expected to significantly increase water demand in a manner that would require or result in the relocation or construction of new or expanded water facilities.

[38] Central Basin Municipal Water District, *2015 Urban Water Management Plan*, June 2016, available at https://wuedata.water.ca.gov/public/uwmp_attachments/7950879752/FINAL%20CBMWD%20UWMP%20June%202016.pdf, accessed March 2021.

[39] Based on the Los Angeles County Sanitation District wastewater generation rate of 20 gallons per day per students for a college/university. This generation rate is applied to the projected increase in students, faculty, and other employees as a result of the proposed project. Estimated water demand is assumed to be 120 percent of wastewater flows.

Wastewater
Wastewater generated by the proposed project would be treated at the Joint Water Pollution Control Plant (JWPCP). JWPCP treats an average of 260 million gallons of wastewater per day (mgd). It has a total permitted capacity of 400 million gallons of wastewater per day (mgd).[40] When the Los Angeles County Sanitation District (LACSD) wastewater generation rate of 20 gallons per day (gpd) per student for a college/university is applied to the projected increase in students, faculty, and other employees, implementation of the proposed project would result in the generation of approximately 5,300 gpd of wastewater, which represents less than 0.1 percent of the JWPCP remaining available treatment capacity.[41] Wastewater generation by the proposed project would likely be lower since the proposed project would be required to implement water conservation measures from the County Green Building Standards. JWPCP would have adequate remaining available treatment capacity to accommodate the proposed project.

Sewer lines serving the project site are owned and maintained by Los Angeles County and LACSD. The Willowbrook TOD Specific Plan does not identify any deficiencies in the existing sewer systems serving the project site and indicates that the sewers serving the project site are expected to remain below the sewage capacity even when additional development are constructed in the area. Thus, new or expanded wastewater treatment facilities would not be required, and impacts would be less than significant.

Stormwater Drainage
Existing stormwater runoff infrastructure on the project site conveys stormwater from the project site to the County storm drains and channels via curb and gutters. The amount of stormwater that flows into the existing storm drains are expected to be less than existing conditions since the proposed project would be designed to allow stormwater runoff to be collected and treated on-site. Any runoff that is not captured on-site would continue to be conveyed to the existing storm drains. Implementation of the proposed project would not result in a substantial increase in impervious surfaces. Grading and other construction activities are not expected to alter the drainage pattern of the project site and, thus, drainage patterns would continue to flow in a southerly direction, similar to existing conditions. Additionally, the proposed project would be required to comply with the County's LID Ordinance. LID uses site design and stormwater management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's pre-development hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. Accordingly, the proposed project would not cause a substantial increase in the peak flow rates or volumes that would exceed the drainage capacity of existing stormwater drainage facilities. Therefore, the proposed project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities, and impacts would be less than significant.

Electrical
Southern California Edison (SCE) provides electricity for the project site. Electricity use associated with the proposed project includes interior and exterior lighting, HVAC systems, electronic equipment, machinery, refrigeration, appliances, and security systems. While energy use would increase with implementation of the proposed project, the proposed project would not be large enough to create an electricity system capacity problem and would not require the construction of new electrical facilities or the expansion of existing facilities. The proposed project would be subject to the County Green Building Standards to provide energy conservation measures, such as the use of high efficiency LED light fixtures. Additionally, the proposed building would be designed to achieve the LEED Gold equivalent level and implement energy conservation measures that includes rooftop photovoltaic panels and designing the proposed building to take advantage of natural light and daylighting strategies. Therefore, the proposed project is not expected to require or result in the relocation or construction of new or expanded electricity generation facilities, and impacts would be less than significant.

Natural Gas
Natural gas for the project site is supplied by the Southern California Gas Company. While natural gas consumption on the project site would increase with implementation of the proposed project, the proposed 92,618-square foot HPEB would not be large enough to create a capacity problem that would require the construction of new natural gas facilities or the expansion of existing facilities. Additionally, the proposed project would apply energy conservation measures to comply with the County Green Building Standards and to achieve the LEED Gold equivalent level. Therefore, impacts to natural gas facilities would be less than significant.

Telecommunications
General telephone and electronic lines provide telecommunication services to the project site. The proposed project would potentially require additions of new on-site telecommunications infrastructure to serve the new building. Installation of new telecommunications infrastructure would be limited to on-site telecommunications distribution and minor off-site work associated with connections to the public 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 expected to cause significant environmental effects. Therefore, the proposed project is not expected to require or result in the relocation or construction of new or expanded telecommunications facilities, and impacts would be less than significant.

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

Less-Than-Significant Impact. As discussed in Response to Checklist Question 19a, the proposed project would result in a water demand of approximately 2,800 gpd, or 1.8 million gallon per year. Water consumption would likely be lower because the proposed project would be required to incorporate numerous water saving strategies to reduce demand on the water supply system, including low-flow fixtures and water efficient landscaping. Sufficient water supplies would be available to serve the proposed project during normal, single dry, and multiple dry years. Additionally, as part of the application for development, the project applicant is required to provide proof of availability of adequate water facilities prior to building the proposed addition. Therefore, impacts related to water supplies would be less than significant.

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

Less-Than-Significant Impact. A significant impact would occur if the proposed project would increase wastewater generated that would exceed the capacity of the wastewater treatment provider's capacity to serve the project. As discussed in Response to Checklist Question 19a, wastewater generated by the proposed project is not expected to result in a wastewater system capacity problem as the proposed project would represent less-than-0.1 percent of the JWPCP remaining available treatment capacity. The proposed project does not contain any uses that would generate excessive demands on the sewer system or require the construction of additional wastewater treatment facilities. It is anticipated that the proposed project's wastewater demand would be met,

[40] Los Angeles County Sanitation Districts, *Wastewater Treatment Process at the JWPCP*, https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/wwtreatmentprocessjwpcp.asp, accessed February 2021.
[41] Los Angeles County Sanitation Districts, *Table 1, Loadings for Each Class of Land Use*, http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531, accessed February 2021.

and no new entitlements or resources would be required to meet the proposed project's expected wastewater needs. Therefore, impacts related to wastewater would be less than significant.

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?	☐	☐	☒	☐

Less-Than-Significant Impact. It is anticipated that solid waste from the proposed project would be hauled to Sunshine Canyon, as it is the closest Class III landfill that serves the unincorporated Los Angeles County. In 2017, the landfill received an average of 6,469 tons per day of waste. It has a maximum permitted daily capacity of 12,100 tons and a remaining permitted capacity of 68,036,429 tons.[42] Assuming a solid waste generation factor of 3.67 tons per 100 students per year, the proposed project would generate approximately 8.8 tons per year, or 3,212 tons per day, of solid waste.[43] Solid waste generated by the proposed project would be within Sunshine Canyon's remaining daily permitted intake capacity. The Integrated Waste Management Act of 1989 (AB 939) requires jurisdictions to comply with waste reduction goals. The proposed project would be required to be in compliant with the California Integrated Waste Management Act of 1989 (AB 939), which requires 50 percent of solid waste generated by jurisdictions to be diverted away from landfills. The proposed project would not generate excess solid waste that would impair the County's attainment of solid waste diversion per AB 939. The proposed project would be adequately served by the County's solid waste provider and would comply with applicable regulations related to solid waste. Therefore, impacts related to solid waste would be less than significant.

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

Less-Than-Significant Impact. See Response to Checklist Question 19d.

[42] Los Angeles County Department of Public Works, *Countywide Integrated Waste Management Plan 2017 Annual Report*, April 2019, available at https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=11230&hp=yes&type=PDF, accessed March 2021.
[43] CalRecycle, *2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California*, November 10, 2015.

20. WILDFIRE

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

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

No Impact. The project site is not located in or near a state responsibility area or in a very high fire hazard severity zone (VHFHSZ), as identified by CalFire. The nearest fire hazard severity zone (including VHFHSZ) is located approximately 7.8 miles northwest of the project site. Additionally, as discussed in Response to Checklist Question 9f, the proposed project would have no impact related to 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?	☐	☐	☐	☒

No Impact. As discussed in Response to Checklist Question 20a, the project site is not located in or near a state responsibility area or in a VHFHSZ, and proposed project would not require any brush clearing, vegetation management, or fuel modification for these areas. Additionally, the project site and its surrounding area is relatively flat, and no slopes or hills are located in the vicinity of the project site. The proposed project would not exacerbate wildfire risks and, therefore, would not expose people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impacts would occur.

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

No Impact. As discussed in Response to Checklist Question 20a, the project site is not located in or near a state responsibility area or in a VHFHSZ. The proposed project would adhere to relevant building design codes, including the state and County fire codes and 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. Therefore, no impact would occur.

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?	☐	☐	☐	☒

No Impact. As discussed in Response to Checklist Question 20a, the project site is not located in or near a state responsibility area or in a VHFHSZ. The project site and its surrounding area is relatively flat, and no slopes or hills are located in the vicinity of the project site. As a result, people or structures would not be exposed to significant post-wildfire risks. Therefore, no impact would occur.

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

No Impact. As discussed in Response to Checklist Question 20a, the project site is not located in or near a state responsibility area or in a VHFHSZ. Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

21. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

Less-Than-Significant Impact. The project site is located within an urban area and has been previously disturbed. As discussed throughout this Initial Study, the proposed project does not have the potential to substantially 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, or reduce the number or restrict the range of a rare or endangered plant or animal. The project site does not contain any cultural resources and would not eliminate important examples of the major periods of California history or prehistory. Therefore, impacts are expected to be less than significant.

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

Less-Than-Significant Impact with Mitigation Incorporated. 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. The environmental topic areas that were found to have no impact are not expected to cause the proposed project to make any contributions to potential cumulative impacts because a no impact conclusion means that the proposed project would have no contribution to that particular environmental topic area. Similarly, the environmental topic areas that were found to have a less-than-significant impact are not expected to cause the proposed project to significantly contribute to cumulative impacts since the proposed project's contribution to that particular environmental topic area is not large enough to contribute to significant cumulative impacts.

As discussed in Response to Checklist Question 9b, soils on the project site are contaminated. Implementation of Mitigation Measure **HM-1** would ensure that impacts related to the creation of hazards to the public or environment through the release of hazardous materials into the environment would be less than significant. The proposed project's effect on hazards would be reduced to a level that would not be cumulatively considerable.

As discussed in Response to Checklist Question 10c(i), 10c(ii), 10c(iii), and 10e, Mitigation Measures **HW-1** and **HW-2** would be implemented to ensure that the proposed project would not alter existing drainage patterns in a manner that would result in erosion, siltation, or flooding, and would not increase stormwater

runoff. Implementation of Mitigation Measures **HW-1** and **HW-2** would ensure that impacts related to hydrology and water quality would be less than significant. The proposed project's effect on hydrology and water quality would be reduced to a level that would not be cumulatively considerable.

Although related projects may be constructed in the surrounding area, the proposed project would not significantly contribute to cumulative impacts. The proposed project is not expected to have cumulative considerable effects on the environment and, therefore, the proposed project would not have impacts that are individually limited but cumulatively considerable. Impacts would be less than significant with mitigation incorporated.

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

Less-Than-Significant Impact. 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. As a result, the proposed project would not have the potential to result in substantial adverse direct and indirect effects on human beings. Impacts would be less than significant.

Appendix A

Air Quality, Energy, and Greenhouse Gas Calculations

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Charles Drew University Health Professionals Education Building

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
University/College (4yr)	240.00	Student	1.08	100,000.00	0
Unenclosed Parking with Elevator	111.00	Space	0.89	44,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2025
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	691.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Uses

Construction Phase - Project Schedule

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Trips and VMT - Project Trips:
~ Demo = 4 loads/day
~ Grading = 8 loads/day

Demolition - Remove existing buildings (9,730 sq ft = 450 tons debris) & surface parking lot (38,700 sq ft = 860 tons debris).

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading - Excavate approximately 3 feet x 46,650 sq. ft.

Architectural Coating - SCAQMD Rule 1113 = 50 g/L building envelope

Vehicle Trips - 299 Daily Trips after 20% trip reduction credit for transit.

Area Coating - SCAQMD Rule 1113 = 50 g/L building envelope

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 Compliance

Area Mitigation - SCAQMD Rule 1113 Compliance is Standard (Not Mitigation)

Energy Mitigation - Project Description states solar panels will be installed on parking structure to provide 10% of total energy requirements.

Water Mitigation - LAGBC Compliance

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	4.00	100.00
tblConstructionPhase	NumDays	200.00	415.00
tblConstructionPhase	NumDays	10.00	85.00
tblConstructionPhase	NumDays	10.00	85.00
tblConstructionPhase	PhaseEndDate	3/31/2023	4/7/2023
tblConstructionPhase	PhaseEndDate	4/6/2023	8/25/2023
tblConstructionPhase	PhaseEndDate	1/11/2024	3/28/2025
tblConstructionPhase	PhaseEndDate	1/25/2024	3/28/2025
tblConstructionPhase	PhaseEndDate	2/8/2024	3/28/2025
tblConstructionPhase	PhaseStartDate	4/1/2023	4/10/2023
tblConstructionPhase	PhaseStartDate	4/7/2023	8/28/2023
tblConstructionPhase	PhaseStartDate	1/12/2024	12/2/2024
tblConstructionPhase	PhaseStartDate	1/26/2024	12/2/2024

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblGrading	MaterialExported	0.00	5,200.00
tblLandUse	LandUseSquareFeet	44,111.39	100,000.00
tblLandUse	LotAcreage	1.01	1.08
tblLandUse	LotAcreage	1.00	0.89
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripNumber	130.00	200.00
tblTripsAndVMT	HaulingTripNumber	650.00	1,600.00
tblTripsAndVMT	VendorTripLength	6.90	12.00
tblTripsAndVMT	VendorTripLength	6.90	12.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	24.00	32.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	40.00
tblTripsAndVMT	WorkerTripNumber	61.00	300.00
tblTripsAndVMT	WorkerTripNumber	10.00	40.00
tblTripsAndVMT	WorkerTripNumber	12.00	40.00
tblVehicleTrips	ST_TR	1.30	1.25
tblVehicleTrips	WD_TR	1.56	1.25

2.0 Emissions Summary

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.8040	10.5731	21.1198	0.0521	3.5583	0.3545	3.9127	0.9483	0.3263	1.2747	0.0000	5,259.8851	5,259.8851	0.6609	0.1830	5,325.9785
2024	12.6364	19.3994	36.4157	0.0820	4.5550	0.7322	5.2871	1.2150	0.6837	1.8987	0.0000	8,243.7323	8,243.7323	1.1745	0.2237	8,339.7671
2025	12.4520	18.0705	35.5283	0.0807	4.5550	0.6413	5.1963	1.2150	0.5986	1.8136	0.0000	8,140.0985	8,140.0985	1.1653	0.2156	8,233.4782
Maximum	**12.6364**	**19.3994**	**36.4157**	**0.0820**	**4.5550**	**0.7322**	**5.2871**	**1.2150**	**0.6837**	**1.8987**	**0.0000**	**8,243.7323**	**8,243.7323**	**1.1745**	**0.2237**	**8,339.7671**

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	1.8040	10.5731	21.1198	0.0521	3.5583	0.3545	3.9127	0.9483	0.3263	1.2747	0.0000	5,259.8851	5,259.8851	0.6609	0.1830	5,325.9785
2024	12.6364	19.3994	36.4157	0.0820	4.5550	0.7322	5.2871	1.2150	0.6837	1.8987	0.0000	8,243.7323	8,243.7323	1.1745	0.2237	8,339.7671
2025	12.4520	18.0705	35.5283	0.0807	4.5550	0.6413	5.1963	1.2150	0.5986	1.8136	0.0000	8,140.0985	8,140.0985	1.1653	0.2156	8,233.4782
Maximum	**12.6364**	**19.3994**	**36.4157**	**0.0820**	**4.5550**	**0.7322**	**5.2871**	**1.2150**	**0.6837**	**1.8987**	**0.0000**	**8,243.7323**	**8,243.7323**	**1.1745**	**0.2237**	**8,339.7671**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.2246	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0768	0.0768	2.0000e-004		0.0818
Energy	0.0792	0.7204	0.6051	4.3200e-003		0.0548	0.0548		0.0548	0.0548		864.4641	864.4641	0.0166	0.0159	869.6012
Mobile	0.8020	0.8491	7.8251	0.0168	1.8914	0.0126	1.9039	0.5038	0.0117	0.5155		1,760.0614	1,760.0614	0.1233	0.0764	1,785.8999
Total	**3.1058**	**1.5698**	**8.4660**	**0.0212**	**1.8914**	**0.0675**	**1.9588**	**0.5038**	**0.0666**	**0.5704**		**2,624.6023**	**2,624.6023**	**0.1401**	**0.0922**	**2,655.5829**

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	2.2246	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0768	0.0768	2.0000e-004		0.0818
Energy	0.0792	0.7204	0.6051	4.3200e-003		0.0548	0.0548		0.0548	0.0548		864.4641	864.4641	0.0166	0.0159	869.6012
Mobile	0.8020	0.8491	7.8251	0.0168	1.8914	0.0126	1.9039	0.5038	0.0117	0.5155		1,760.0614	1,760.0614	0.1233	0.0764	1,785.8999
Total	**3.1058**	**1.5698**	**8.4660**	**0.0212**	**1.8914**	**0.0675**	**1.9588**	**0.5038**	**0.0666**	**0.5704**		**2,624.6023**	**2,624.6023**	**0.1401**	**0.0922**	**2,655.5829**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	3/6/2023	4/7/2023	5	25	
2	Grading	Grading	4/10/2023	8/25/2023	5	100	
3	Building Construction	Building Construction	8/28/2023	3/28/2025	5	415	
4	Paving	Paving	12/2/2024	3/28/2025	5	85	
5	Architectural Coating	Architectural Coating	12/2/2024	3/28/2025	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 50

Acres of Paving: 0.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000; Striped Parking Area: 2,664 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Graders	1	6.00	187	0.41
Demolition	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Aerial Lifts	2	7.00	63	0.31
Building Construction	Cranes	1	6.00	231	0.29

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	2	6.00	78	0.48
Architectural Coating	Aerial Lifts	2	4.00	63	0.31

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	3	20.00	2.00	200.00	14.70	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	40.00	2.00	1,600.00	14.70	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	300.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	40.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					1.1213	0.0000	1.1213	0.1698	0.0000	0.1698			0.0000			0.0000
Off-Road	0.5525	6.1772	5.1743	0.0104		0.2457	0.2457		0.2261	0.2261		1,008.4002	1,008.4002	0.3261		1,016.5537
Total	**0.5525**	**6.1772**	**5.1743**	**0.0104**	**1.1213**	**0.2457**	**1.3671**	**0.1698**	**0.2261**	**0.3959**		**1,008.4002**	**1,008.4002**	**0.3261**		**1,016.5537**

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	2.9800e-003	0.1221	0.0389	6.3000e-004	0.0222	6.6000e-004	0.0229	6.4000e-003	6.4000e-004	7.0400e-003		67.3749	67.3749	2.2400e-003	9.6600e-003	70.3091
Worker	0.0688	0.0493	0.6662	1.8700e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2400e-003	0.0605		191.8453	191.8453	5.1100e-003	4.9300e-003	193.4424
Total	**0.0880**	**1.2614**	**0.9875**	**7.1800e-003**	**0.3858**	**8.6100e-003**	**0.3945**	**0.1041**	**8.2000e-003**	**0.1123**		**773.8902**	**773.8902**	**0.0356**	**0.0963**	**803.4842**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					0.4373	0.0000	0.4373	0.0662	0.0000	0.0662			0.0000			0.0000
Off-Road	0.5525	6.1772	5.1743	0.0104		0.2457	0.2457		0.2261	0.2261	0.0000	1,008.4002	1,008.4002	0.3261		1,016.5537
Total	**0.5525**	**6.1772**	**5.1743**	**0.0104**	**0.4373**	**0.2457**	**0.6831**	**0.0662**	**0.2261**	**0.2923**	**0.0000**	**1,008.4002**	**1,008.4002**	**0.3261**		**1,016.5537**

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	2.9800e-003	0.1221	0.0389	6.3000e-004	0.0222	6.6000e-004	0.0229	6.4000e-003	6.4000e-004	7.0400e-003		67.3749	67.3749	2.2400e-003	9.6600e-003	70.3091
Worker	0.0688	0.0493	0.6662	1.8700e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2400e-003	0.0605		191.8453	191.8453	5.1100e-003	4.9300e-003	193.4424
Total	**0.0880**	**1.2614**	**0.9875**	**7.1800e-003**	**0.3858**	**8.6100e-003**	**0.3945**	**0.1041**	**8.2000e-003**	**0.1123**		**773.8902**	**773.8902**	**0.0356**	**0.0963**	**803.4842**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					0.5361	0.0000	0.5361	0.0582	0.0000	0.0582			0.0000			0.0000
Off-Road	0.6483	7.3405	5.5974	0.0121		0.2834	0.2834		0.2608	0.2608		1,168.6140	1,168.6140	0.3780		1,178.0629
Total	**0.6483**	**7.3405**	**5.5974**	**0.0121**	**0.5361**	**0.2834**	**0.8196**	**0.0582**	**0.2608**	**0.3189**		**1,168.6140**	**1,168.6140**	**0.3780**		**1,178.0629**

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	0.0325	2.1799	0.5649	9.3700e-003	0.2801	0.0132	0.2933	0.0768	0.0126	0.0894		1,029.3400	1,029.3400	0.0566	0.1635	1,079.4654
Vendor	2.9800e-003	0.1221	0.0389	6.3000e-004	0.0222	6.6000e-004	0.0229	6.4000e-003	6.4000e-004	7.0400e-003		67.3749	67.3749	2.2400e-003	9.6600e-003	70.3091
Worker	0.1376	0.0986	1.3323	3.7500e-003	0.4471	2.7000e-003	0.4498	0.1186	2.4800e-003	0.1211		383.6907	383.6907	0.0102	9.8600e-003	386.8849
Total	**0.1731**	**2.4006**	**1.9361**	**0.0138**	**0.7494**	**0.0166**	**0.7660**	**0.2018**	**0.0158**	**0.2175**		**1,480.4055**	**1,480.4055**	**0.0690**	**0.1830**	**1,536.6593**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					0.2091	0.0000	0.2091	0.0227	0.0000	0.0227			0.0000			0.0000
Off-Road	0.6483	7.3405	5.5974	0.0121		0.2834	0.2834		0.2608	0.2608	0.0000	1,168.6140	1,168.6140	0.3780		1,178.0629
Total	**0.6483**	**7.3405**	**5.5974**	**0.0121**	**0.2091**	**0.2834**	**0.4925**	**0.0227**	**0.2608**	**0.2834**	**0.0000**	**1,168.6140**	**1,168.6140**	**0.3780**		**1,178.0629**

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	0.0325	2.1799	0.5649	9.3700e-003	0.2801	0.0132	0.2933	0.0768	0.0126	0.0894		1,029.3400	1,029.3400	0.0566	0.1635	1,079.4654
Vendor	2.9800e-003	0.1221	0.0389	6.3000e-004	0.0222	6.6000e-004	0.0229	6.4000e-003	6.4000e-004	7.0400e-003		67.3749	67.3749	2.2400e-003	9.6600e-003	70.3091
Worker	0.1376	0.0986	1.3323	3.7500e-003	0.4471	2.7000e-003	0.4498	0.1186	2.4800e-003	0.1211		383.6907	383.6907	0.0102	9.8600e-003	386.8849
Total	**0.1731**	**2.4006**	**1.9361**	**0.0138**	**0.7494**	**0.0166**	**0.7660**	**0.2018**	**0.0158**	**0.2175**		**1,480.4055**	**1,480.4055**	**0.0690**	**0.1830**	**1,536.6593**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.7363	8.5473	10.6366	0.0180		0.3280	0.3280		0.3018	0.3018		1,740.2200	1,740.2200	0.5628		1,754.2905
Total	**0.7363**	**8.5473**	**10.6366**	**0.0180**		**0.3280**	**0.3280**		**0.3018**	**0.3018**		**1,740.2200**	**1,740.2200**	**0.5628**		**1,754.2905**

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	0.0356	1.2860	0.4908	5.9700e-003	0.2050	6.2100e-003	0.2112	0.0590	5.9400e-003	0.0650		641.9850	641.9850	0.0214	0.0924	670.0515
Worker	1.0322	0.7398	9.9924	0.0281	3.3533	0.0202	3.3735	0.8893	0.0186	0.9079		2,877.6801	2,877.6801	0.0767	0.0740	2,901.6364
Total	**1.0677**	**2.0258**	**10.4832**	**0.0341**	**3.5583**	**0.0264**	**3.5847**	**0.9483**	**0.0246**	**0.9729**		**3,519.6651**	**3,519.6651**	**0.0981**	**0.1664**	**3,571.6880**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.7363	8.5473	10.6366	0.0180		0.3280	0.3280		0.3018	0.3018	0.0000	1,740.2200	1,740.2200	0.5628		1,754.2905
Total	**0.7363**	**8.5473**	**10.6366**	**0.0180**		**0.3280**	**0.3280**		**0.3018**	**0.3018**	**0.0000**	**1,740.2200**	**1,740.2200**	**0.5628**		**1,754.2905**

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	0.0356	1.2860	0.4908	5.9700e-003	0.2050	6.2100e-003	0.2112	0.0590	5.9400e-003	0.0650		641.9850	641.9850	0.0214	0.0924	670.0515
Worker	1.0322	0.7398	9.9924	0.0281	3.3533	0.0202	3.3735	0.8893	0.0186	0.9079		2,877.6801	2,877.6801	0.0767	0.0740	2,901.6364
Total	**1.0677**	**2.0258**	**10.4832**	**0.0341**	**3.5583**	**0.0264**	**3.5847**	**0.9483**	**0.0246**	**0.9729**		**3,519.6651**	**3,519.6651**	**0.0981**	**0.1664**	**3,571.6880**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.7045	8.0845	10.6027	0.0180		0.2970	0.2970		0.2732	0.2732		1,740.3787	1,740.3787	0.5629		1,754.4506
Total	**0.7045**	**8.0845**	**10.6027**	**0.0180**		**0.2970**	**0.2970**		**0.2732**	**0.2732**		**1,740.3787**	**1,740.3787**	**0.5629**		**1,754.4506**

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	0.0344	1.2886	0.4805	5.8700e-003	0.2050	6.2500e-003	0.2112	0.0590	5.9800e-003	0.0650		632.3659	632.3659	0.0215	0.0911	660.0488
Worker	0.9652	0.6605	9.3092	0.0273	3.3533	0.0194	3.3727	0.8893	0.0179	0.9072		2,818.6196	2,818.6196	0.0695	0.0688	2,840.8445
Total	**0.9996**	**1.9491**	**9.7897**	**0.0332**	**3.5583**	**0.0257**	**3.5839**	**0.9483**	**0.0238**	**0.9722**		**3,450.9855**	**3,450.9855**	**0.0909**	**0.1599**	**3,500.8932**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.7045	8.0845	10.6027	0.0180		0.2970	0.2970		0.2732	0.2732	0.0000	1,740.3787	1,740.3787	0.5629		1,754.4506
Total	**0.7045**	**8.0845**	**10.6027**	**0.0180**		**0.2970**	**0.2970**		**0.2732**	**0.2732**	**0.0000**	**1,740.3787**	**1,740.3787**	**0.5629**		**1,754.4506**

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	0.0344	1.2886	0.4805	5.8700e-003	0.2050	6.2500e-003	0.2112	0.0590	5.9800e-003	0.0650		632.3659	632.3659	0.0215	0.0911	660.0488
Worker	0.9652	0.6605	9.3092	0.0273	3.3533	0.0194	3.3727	0.8893	0.0179	0.9072		2,818.6196	2,818.6196	0.0695	0.0688	2,840.8445
Total	**0.9996**	**1.9491**	**9.7897**	**0.0332**	**3.5583**	**0.0257**	**3.5839**	**0.9483**	**0.0238**	**0.9722**		**3,450.9855**	**3,450.9855**	**0.0909**	**0.1599**	**3,500.8932**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.6620	7.5369	10.5558	0.0180		0.2609	0.2609		0.2400	0.2400		1,740.7939	1,740.7939	0.5630		1,754.8691
Total	**0.6620**	**7.5369**	**10.5558**	**0.0180**		**0.2609**	**0.2609**		**0.2400**	**0.2400**		**1,740.7939**	**1,740.7939**	**0.5630**		**1,754.8691**

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	0.0333	1.2826	0.4718	5.7600e-003	0.2050	6.2700e-003	0.2113	0.0590	6.0000e-003	0.0650		620.9999	620.9999	0.0216	0.0895	648.2161
Worker	0.9058	0.5933	8.6826	0.0264	3.3533	0.0185	3.3718	0.8893	0.0170	0.9064		2,749.9821	2,749.9821	0.0627	0.0642	2,770.6808
Total	**0.9391**	**1.8759**	**9.1544**	**0.0322**	**3.5583**	**0.0248**	**3.5831**	**0.9483**	**0.0230**	**0.9714**		**3,370.9820**	**3,370.9820**	**0.0843**	**0.1537**	**3,418.8969**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.6620	7.5369	10.5558	0.0180		0.2609	0.2609		0.2400	0.2400	0.0000	1,740.7939	1,740.7939	0.5630		1,754.8691
Total	**0.6620**	**7.5369**	**10.5558**	**0.0180**		**0.2609**	**0.2609**		**0.2400**	**0.2400**	**0.0000**	**1,740.7939**	**1,740.7939**	**0.5630**		**1,754.8691**

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	0.0333	1.2826	0.4718	5.7600e-003	0.2050	6.2700e-003	0.2113	0.0590	6.0000e-003	0.0650		620.9999	620.9999	0.0216	0.0895	648.2161
Worker	0.9058	0.5933	8.6826	0.0264	3.3533	0.0185	3.3718	0.8893	0.0170	0.9064		2,749.9821	2,749.9821	0.0627	0.0642	2,770.6808
Total	**0.9391**	**1.8759**	**9.1544**	**0.0322**	**3.5583**	**0.0248**	**3.5831**	**0.9483**	**0.0230**	**0.9714**		**3,370.9820**	**3,370.9820**	**0.0843**	**0.1537**	**3,418.8969**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5739	5.5845	8.5940	0.0130		0.2703	0.2703		0.2487	0.2487		1,259.9816	1,259.9816	0.4075		1,270.1692
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5739**	**5.5845**	**8.5940**	**0.0130**		**0.2703**	**0.2703**		**0.2487**	**0.2487**		**1,259.9816**	**1,259.9816**	**0.4075**		**1,270.1692**

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	0.0172	0.6443	0.2402	2.9400e-003	0.1025	3.1300e-003	0.1056	0.0295	2.9900e-003	0.0325		316.1829	316.1829	0.0107	0.0456	330.0244
Worker	0.1287	0.0881	1.2412	3.6400e-003	0.4471	2.5900e-003	0.4497	0.1186	2.3800e-003	0.1210		375.8160	375.8160	9.2600e-003	9.1700e-003	378.7793
Total	**0.1459**	**0.7324**	**1.4815**	**6.5800e-003**	**0.5496**	**5.7200e-003**	**0.5553**	**0.1481**	**5.3700e-003**	**0.1535**		**691.9989**	**691.9989**	**0.0200**	**0.0547**	**708.8036**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5739	5.5845	8.5940	0.0130		0.2703	0.2703		0.2487	0.2487	0.0000	1,259.9816	1,259.9816	0.4075		1,270.1692
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5739**	**5.5845**	**8.5940**	**0.0130**		**0.2703**	**0.2703**		**0.2487**	**0.2487**	**0.0000**	**1,259.9816**	**1,259.9816**	**0.4075**		**1,270.1692**

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	0.0172	0.6443	0.2402	2.9400e-003	0.1025	3.1300e-003	0.1056	0.0295	2.9900e-003	0.0325		316.1829	316.1829	0.0107	0.0456	330.0244
Worker	0.1287	0.0881	1.2412	3.6400e-003	0.4471	2.5900e-003	0.4497	0.1186	2.3800e-003	0.1210		375.8160	375.8160	9.2600e-003	9.1700e-003	378.7793
Total	**0.1459**	**0.7324**	**1.4815**	**6.5800e-003**	**0.5496**	**5.7200e-003**	**0.5553**	**0.1481**	**5.3700e-003**	**0.1535**		**691.9989**	**691.9989**	**0.0200**	**0.0547**	**708.8036**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5291	5.0498	8.5639	0.0130		0.2358	0.2358		0.2169	0.2169		1,259.9224	1,259.9224	0.4075		1,270.1095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5291**	**5.0498**	**8.5639**	**0.0130**		**0.2358**	**0.2358**		**0.2169**	**0.2169**		**1,259.9224**	**1,259.9224**	**0.4075**		**1,270.1095**

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	0.0167	0.6413	0.2359	2.8800e-003	0.1025	3.1400e-003	0.1056	0.0295	3.0000e-003	0.0325		310.5000	310.5000	0.0108	0.0448	324.1081
Worker	0.1208	0.0791	1.1577	3.5200e-003	0.4471	2.4700e-003	0.4496	0.1186	2.2700e-003	0.1209		366.6643	366.6643	8.3600e-003	8.5600e-003	369.4241
Total	**0.1374**	**0.7204**	**1.3936**	**6.4000e-003**	**0.5496**	**5.6100e-003**	**0.5552**	**0.1481**	**5.2700e-003**	**0.1534**		**677.1643**	**677.1643**	**0.0192**	**0.0533**	**693.5322**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5291	5.0498	8.5639	0.0130		0.2358	0.2358		0.2169	0.2169	0.0000	1,259.9224	1,259.9224	0.4075		1,270.1095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5291**	**5.0498**	**8.5639**	**0.0130**		**0.2358**	**0.2358**		**0.2169**	**0.2169**	**0.0000**	**1,259.9224**	**1,259.9224**	**0.4075**		**1,270.1095**

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	0.0167	0.6413	0.2359	2.8800e-003	0.1025	3.1400e-003	0.1056	0.0295	3.0000e-003	0.0325		310.5000	310.5000	0.0108	0.0448	324.1081
Worker	0.1208	0.0791	1.1577	3.5200e-003	0.4471	2.4700e-003	0.4496	0.1186	2.2700e-003	0.1209		366.6643	366.6643	8.3600e-003	8.5600e-003	369.4241
Total	**0.1374**	**0.7204**	**1.3936**	**6.4000e-003**	**0.5496**	**5.6100e-003**	**0.5552**	**0.1481**	**5.2700e-003**	**0.1534**		**677.1643**	**677.1643**	**0.0192**	**0.0533**	**693.5322**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	9.6879					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3959	2.9608	4.7067	7.6100e-003		0.1309	0.1309		0.1302	0.1302		724.5717	724.5717	0.0840		726.6713
Total	**10.0839**	**2.9608**	**4.7067**	**7.6100e-003**		**0.1309**	**0.1309**		**0.1302**	**0.1302**		**724.5717**	**724.5717**	**0.0840**		**726.6713**

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	0.1287	0.0881	1.2412	3.6400e-003	0.4471	2.5900e-003	0.4497	0.1186	2.3800e-003	0.1210		375.8160	375.8160	9.2600e-003	9.1700e-003	378.7793
Total	**0.1287**	**0.0881**	**1.2412**	**3.6400e-003**	**0.4471**	**2.5900e-003**	**0.4497**	**0.1186**	**2.3800e-003**	**0.1210**		**375.8160**	**375.8160**	**9.2600e-003**	**9.1700e-003**	**378.7793**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	9.6879					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3959	2.9608	4.7067	7.6100e-003		0.1309	0.1309		0.1302	0.1302	0.0000	724.5717	724.5717	0.0840		726.6713
Total	**10.0839**	**2.9608**	**4.7067**	**7.6100e-003**		**0.1309**	**0.1309**		**0.1302**	**0.1302**	**0.0000**	**724.5717**	**724.5717**	**0.0840**		**726.6713**

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	0.1287	0.0881	1.2412	3.6400e-003	0.4471	2.5900e-003	0.4497	0.1186	2.3800e-003	0.1210		375.8160	375.8160	9.2600e-003	9.1700e-003	378.7793
Total	**0.1287**	**0.0881**	**1.2412**	**3.6400e-003**	**0.4471**	**2.5900e-003**	**0.4497**	**0.1186**	**2.3800e-003**	**0.1210**		**375.8160**	**375.8160**	**9.2600e-003**	**9.1700e-003**	**378.7793**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	9.6879					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3756	2.8084	4.7030	7.6100e-003		0.1119	0.1119		0.1112	0.1112		724.5717	724.5717	0.0830		726.6466
Total	**10.0635**	**2.8084**	**4.7030**	**7.6100e-003**		**0.1119**	**0.1119**		**0.1112**	**0.1112**		**724.5717**	**724.5717**	**0.0830**		**726.6466**

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	0.1208	0.0791	1.1577	3.5200e-003	0.4471	2.4700e-003	0.4496	0.1186	2.2700e-003	0.1209		366.6643	366.6643	8.3600e-003	8.5600e-003	369.4241
Total	**0.1208**	**0.0791**	**1.1577**	**3.5200e-003**	**0.4471**	**2.4700e-003**	**0.4496**	**0.1186**	**2.2700e-003**	**0.1209**		**366.6643**	**366.6643**	**8.3600e-003**	**8.5600e-003**	**369.4241**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	9.6879					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3756	2.8084	4.7030	7.6100e-003		0.1119	0.1119		0.1112	0.1112	0.0000	724.5717	724.5717	0.0830		726.6466
Total	**10.0635**	**2.8084**	**4.7030**	**7.6100e-003**		**0.1119**	**0.1119**		**0.1112**	**0.1112**	**0.0000**	**724.5717**	**724.5717**	**0.0830**		**726.6466**

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	0.1208	0.0791	1.1577	3.5200e-003	0.4471	2.4700e-003	0.4496	0.1186	2.2700e-003	0.1209		366.6643	366.6643	8.3600e-003	8.5600e-003	369.4241
Total	**0.1208**	**0.0791**	**1.1577**	**3.5200e-003**	**0.4471**	**2.4700e-003**	**0.4496**	**0.1186**	**2.2700e-003**	**0.1209**		**366.6643**	**366.6643**	**8.3600e-003**	**8.5600e-003**	**369.4241**

Charles Drew University Health Professionals Education Building - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.8020	0.8491	7.8251	0.0168	1.8914	0.0126	1.9039	0.5038	0.0117	0.5155		1,760.0614	1,760.0614	0.1233	0.0764	1,785.8999
Unmitigated	0.8020	0.8491	7.8251	0.0168	1.8914	0.0126	1.9039	0.5038	0.0117	0.5155		1,760.0614	1,760.0614	0.1233	0.0764	1,785.8999

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unenclosed Parking with Elevator	0.00	0.00	0.00		
University/College (4yr)	299.04	299.04	0.00	769,956	769,956
Total	299.04	299.04	0.00	769,956	769,956

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
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
University/College (4yr)	16.60	8.40	6.90	6.40	88.60	5.00	91	9	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unenclosed Parking with Elevator	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
University/College (4yr)	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

Percent of Electricity Use Generated with Renewable 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	0.0792	0.7204	0.6051	4.3200e-003		0.0548	0.0548		0.0548	0.0548		864.4641	864.4641	0.0166	0.0159	869.6012
NaturalGas Unmitigated	0.0792	0.7204	0.6051	4.3200e-003		0.0548	0.0548		0.0548	0.0548		864.4641	864.4641	0.0166	0.0159	869.6012

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					
Unenclosed Parking with Elevator	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
University/College (4yr)	7347.95	0.0792	0.7204	0.6051	4.3200e-003		0.0548	0.0548		0.0548	0.0548		864.4641	864.4641	0.0166	0.0159	869.6012
Total		**0.0792**	**0.7204**	**0.6051**	**4.3200e-003**		**0.0548**	**0.0548**		**0.0548**	**0.0548**		**864.4641**	**864.4641**	**0.0166**	**0.0159**	**869.6012**

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					
Unenclosed Parking with Elevator	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
University/College (4yr)	7.34795	0.0792	0.7204	0.6051	4.3200e-003		0.0548	0.0548		0.0548	0.0548		864.4641	864.4641	0.0166	0.0159	869.6012
Total		**0.0792**	**0.7204**	**0.6051**	**4.3200e-003**		**0.0548**	**0.0548**		**0.0548**	**0.0548**		**864.4641**	**864.4641**	**0.0166**	**0.0159**	**869.6012**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.2246	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0768	0.0768	2.0000e-004		0.0818
Unmitigated	2.2246	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0768	0.0768	2.0000e-004		0.0818

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	0.2256					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0768	0.0768	2.0000e-004		0.0818
Total	**2.2246**	**3.2000e-004**	**0.0357**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0768**	**0.0768**	**2.0000e-004**		**0.0818**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.2256					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0768	0.0768	2.0000e-004		0.0818
Total	**2.2246**	**3.2000e-004**	**0.0357**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0768**	**0.0768**	**2.0000e-004**		**0.0818**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
University/College (4yr)	240.00	Student	1.08	100,000.00	0
Unenclosed Parking with Elevator	111.00	Space	0.89	44,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2025
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	691.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Uses

Construction Phase - Project Schedule

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Trips and VMT - Project Trips:
~ Demo = 4 loads/day
~ Grading = 8 loads/day

Demolition - Remove existing buildings (9,730 sq ft = 450 tons debris) & surface parking lot (38,700 sq ft = 860 tons debris).

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading - Excavate approximately 3 feet x 46,650 sq. ft.

Architectural Coating - SCAQMD Rule 1113 = 50 g/L building envelope

Vehicle Trips - 299 Daily Trips after 20% trip reduction credit for transit.

Area Coating - SCAQMD Rule 1113 = 50 g/L building envelope

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 Compliance

Area Mitigation - SCAQMD Rule 1113 Compliance is Standard (Not Mitigation)

Energy Mitigation - Project Description states solar panels will be installed on parking structure to provide 10% of total energy requirements.

Water Mitigation - LAGBC Compliance

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	4.00	100.00
tblConstructionPhase	NumDays	200.00	415.00
tblConstructionPhase	NumDays	10.00	85.00
tblConstructionPhase	NumDays	10.00	85.00
tblConstructionPhase	PhaseEndDate	3/31/2023	4/7/2023
tblConstructionPhase	PhaseEndDate	4/6/2023	8/25/2023
tblConstructionPhase	PhaseEndDate	1/11/2024	3/28/2025
tblConstructionPhase	PhaseEndDate	1/25/2024	3/28/2025
tblConstructionPhase	PhaseEndDate	2/8/2024	3/28/2025
tblConstructionPhase	PhaseStartDate	4/1/2023	4/10/2023
tblConstructionPhase	PhaseStartDate	4/7/2023	8/28/2023
tblConstructionPhase	PhaseStartDate	1/12/2024	12/2/2024
tblConstructionPhase	PhaseStartDate	1/26/2024	12/2/2024

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblGrading	MaterialExported	0.00	5,200.00
tblLandUse	LandUseSquareFeet	44,111.39	100,000.00
tblLandUse	LotAcreage	1.01	1.08
tblLandUse	LotAcreage	1.00	0.89
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripNumber	130.00	200.00
tblTripsAndVMT	HaulingTripNumber	650.00	1,600.00
tblTripsAndVMT	VendorTripLength	6.90	12.00
tblTripsAndVMT	VendorTripLength	6.90	12.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	24.00	32.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	40.00
tblTripsAndVMT	WorkerTripNumber	61.00	300.00
tblTripsAndVMT	WorkerTripNumber	10.00	40.00
tblTripsAndVMT	WorkerTripNumber	12.00	40.00
tblVehicleTrips	ST_TR	1.30	1.25
tblVehicleTrips	WD_TR	1.56	1.25

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1262	1.0581	1.4169	3.8700e-003	0.2393	0.0341	0.2735	0.0581	0.0314	0.0896	0.0000	357.0789	357.0789	0.0514	0.0162	363.1988
2024	0.3334	1.4199	2.8783	7.1000e-003	0.4678	0.0468	0.5146	0.1249	0.0432	0.1681	0.0000	652.4301	652.4301	0.0829	0.0198	660.3878
2025	0.3893	0.5699	1.1275	2.5600e-003	0.1407	0.0202	0.1609	0.0376	0.0189	0.0564	0.0000	234.0661	234.0661	0.0333	6.1900e-003	236.7438
Maximum	**0.3893**	**1.4199**	**2.8783**	**7.1000e-003**	**0.4678**	**0.0468**	**0.5146**	**0.1249**	**0.0432**	**0.1681**	**0.0000**	**652.4301**	**652.4301**	**0.0829**	**0.0198**	**660.3878**

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	0.1262	1.0581	1.4169	3.8700e-003	0.2144	0.0341	0.2486	0.0551	0.0314	0.0865	0.0000	357.0787	357.0787	0.0514	0.0162	363.1987
2024	0.3334	1.4199	2.8783	7.1000e-003	0.4678	0.0468	0.5146	0.1249	0.0432	0.1681	0.0000	652.4298	652.4298	0.0829	0.0198	660.3875
2025	0.3893	0.5699	1.1275	2.5600e-003	0.1407	0.0202	0.1609	0.0376	0.0189	0.0564	0.0000	234.0660	234.0660	0.0333	6.1900e-003	236.7437
Maximum	**0.3893**	**1.4199**	**2.8783**	**7.1000e-003**	**0.4678**	**0.0468**	**0.5146**	**0.1249**	**0.0432**	**0.1681**	**0.0000**	**652.4298**	**652.4298**	**0.0829**	**0.0198**	**660.3875**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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**	**2.94**	**0.00**	**2.62**	**1.39**	**0.00**	**0.98**	**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	**3-6-2023**	**6-5-2023**	0.3078	0.3078
2	**6-6-2023**	**9-5-2023**	0.3414	0.3414
3	**9-6-2023**	**12-5-2023**	0.4005	0.4005
4	**12-6-2023**	**3-5-2024**	0.3874	0.3874
5	**3-6-2024**	**6-5-2024**	0.3812	0.3812
6	**6-6-2024**	**9-5-2024**	0.3795	0.3795
7	**9-6-2024**	**12-5-2024**	0.4088	0.4088
8	**12-6-2024**	**3-5-2025**	0.9951	0.9951
9	**3-6-2025**	**6-5-2025**	0.2507	0.2507
		Highest	0.9951	0.9951

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.4058	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Energy	0.0145	0.1315	0.1104	7.9000e-004		9.9900e-003	9.9900e-003		9.9900e-003	9.9900e-003	0.0000	474.3045	474.3045	0.0185	4.5400e-003	476.1203
Mobile	0.1229	0.1342	1.2301	2.6500e-003	0.2893	1.9600e-003	0.2913	0.0772	1.8200e-003	0.0790	0.0000	251.7184	251.7184	0.0174	0.0109	255.3900
Waste						0.0000	0.0000		0.0000	0.0000	8.8910	0.0000	8.8910	0.5254	0.0000	22.0271
Water						0.0000	0.0000		0.0000	0.0000	0.1630	4.9029	5.0660	0.0170	4.2000e-004	5.6167
Total	**0.5432**	**0.2657**	**1.3450**	**3.4400e-003**	**0.2893**	**0.0120**	**0.3013**	**0.0772**	**0.0118**	**0.0890**	**9.0540**	**730.9345**	**739.9885**	**0.5783**	**0.0158**	**759.1634**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.4058	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Energy	0.0145	0.1315	0.1104	7.9000e-004		9.9900e-003	9.9900e-003		9.9900e-003	9.9900e-003	0.0000	441.1862	441.1862	0.0170	4.3500e-003	442.9055
Mobile	0.1229	0.1342	1.2301	2.6500e-003	0.2893	1.9600e-003	0.2913	0.0772	1.8200e-003	0.0790	0.0000	251.7184	251.7184	0.0174	0.0109	255.3900
Waste						0.0000	0.0000		0.0000	0.0000	8.8910	0.0000	8.8910	0.5254	0.0000	22.0271
Water						0.0000	0.0000		0.0000	0.0000	0.1304	4.3119	4.4423	0.0136	3.4000e-004	4.8841
Total	**0.5432**	**0.2657**	**1.3450**	**3.4400e-003**	**0.2893**	**0.0120**	**0.3013**	**0.0772**	**0.0118**	**0.0890**	**9.0214**	**697.2252**	**706.2466**	**0.5734**	**0.0156**	**725.2160**

	ROG	NOx	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**	**0.36**	**4.61**	**4.56**	**0.86**	**1.71**	**4.47**

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	3/6/2023	4/7/2023	5	25	
2	Grading	Grading	4/10/2023	8/25/2023	5	100	
3	Building Construction	Building Construction	8/28/2023	3/28/2025	5	415	

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4	Paving	Paving	12/2/2024	3/28/2025	5	85	
5	Architectural Coating	Architectural Coating	12/2/2024	3/28/2025	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 50

Acres of Paving: 0.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000; Striped Parking Area: 2,664 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Graders	1	6.00	187	0.41
Demolition	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Aerial Lifts	2	7.00	63	0.31
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Rough Terrain Forklifts	2	7.00	100	0.40
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	2	6.00	78	0.48
Architectural Coating	Aerial Lifts	2	4.00	63	0.31

Trips and VMT

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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	3	20.00	2.00	200.00	14.70	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	40.00	2.00	1,600.00	14.70	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	300.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	40.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	40.00	0.00	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					0.0140	0.0000	0.0140	2.1200e-003	0.0000	2.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9100e-003	0.0772	0.0647	1.3000e-004		3.0700e-003	3.0700e-003		2.8300e-003	2.8300e-003	0.0000	11.4351	11.4351	3.7000e-003	0.0000	11.5275
Total	**6.9100e-003**	**0.0772**	**0.0647**	**1.3000e-004**	**0.0140**	**3.0700e-003**	**0.0171**	**2.1200e-003**	**2.8300e-003**	**4.9500e-003**	**0.0000**	**11.4351**	**11.4351**	**3.7000e-003**	**0.0000**	**11.5275**

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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	2.1000e-004	0.0138	3.5000e-003	6.0000e-005	1.7200e-003	8.0000e-005	1.8000e-003	4.7000e-004	8.0000e-005	5.5000e-004	0.0000	5.8327	5.8327	3.2000e-004	9.3000e-004	6.1168
Vendor	4.0000e-005	1.5400e-003	4.8000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.7636	0.7636	3.0000e-005	1.1000e-004	0.7968
Worker	7.9000e-004	6.3000e-004	8.5400e-003	2.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.4000e-004	0.0000	2.2079	2.2079	6.0000e-005	6.0000e-005	2.2263
Total	**1.0400e-003**	**0.0159**	**0.0125**	**9.0000e-005**	**4.7300e-003**	**1.1000e-004**	**4.8400e-003**	**1.2800e-003**	**1.1000e-004**	**1.3800e-003**	**0.0000**	**8.8042**	**8.8042**	**4.1000e-004**	**1.1000e-003**	**9.1399**

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					5.4700e-003	0.0000	5.4700e-003	8.3000e-004	0.0000	8.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9100e-003	0.0772	0.0647	1.3000e-004		3.0700e-003	3.0700e-003		2.8300e-003	2.8300e-003	0.0000	11.4351	11.4351	3.7000e-003	0.0000	11.5275
Total	**6.9100e-003**	**0.0772**	**0.0647**	**1.3000e-004**	**5.4700e-003**	**3.0700e-003**	**8.5400e-003**	**8.3000e-004**	**2.8300e-003**	**3.6600e-003**	**0.0000**	**11.4351**	**11.4351**	**3.7000e-003**	**0.0000**	**11.5275**

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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	2.1000e-004	0.0138	3.5000e-003	6.0000e-005	1.7200e-003	8.0000e-005	1.8000e-003	4.7000e-004	8.0000e-005	5.5000e-004	0.0000	5.8327	5.8327	3.2000e-004	9.3000e-004	6.1168
Vendor	4.0000e-005	1.5400e-003	4.8000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.7636	0.7636	3.0000e-005	1.1000e-004	0.7968
Worker	7.9000e-004	6.3000e-004	8.5400e-003	2.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.4000e-004	0.0000	2.2079	2.2079	6.0000e-005	6.0000e-005	2.2263
Total	**1.0400e-003**	**0.0159**	**0.0125**	**9.0000e-005**	**4.7300e-003**	**1.1000e-004**	**4.8400e-003**	**1.2800e-003**	**1.1000e-004**	**1.3800e-003**	**0.0000**	**8.8042**	**8.8042**	**4.1000e-004**	**1.1000e-003**	**9.1399**

3.3 Grading - 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					0.0268	0.0000	0.0268	2.9100e-003	0.0000	2.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0324	0.3670	0.2799	6.0000e-004		0.0142	0.0142		0.0130	0.0130	0.0000	53.0074	53.0074	0.0171	0.0000	53.4360
Total	**0.0324**	**0.3670**	**0.2799**	**6.0000e-004**	**0.0268**	**0.0142**	**0.0410**	**2.9100e-003**	**0.0130**	**0.0160**	**0.0000**	**53.0074**	**53.0074**	**0.0171**	**0.0000**	**53.4360**

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3.3 Grading - 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	1.6900e-003	0.1100	0.0280	4.7000e-004	0.0138	6.6000e-004	0.0144	3.7800e-003	6.3000e-004	4.4100e-003	0.0000	46.6616	46.6616	2.5700e-003	7.4100e-003	48.9340
Vendor	1.5000e-004	6.1500e-003	1.9200e-003	3.0000e-005	1.0900e-003	3.0000e-005	1.1300e-003	3.2000e-004	3.0000e-005	3.5000e-004	0.0000	3.0543	3.0543	1.0000e-004	4.4000e-004	3.1873
Worker	6.3500e-003	5.0400e-003	0.0683	1.9000e-004	0.0219	1.3000e-004	0.0221	5.8200e-003	1.2000e-004	5.9500e-003	0.0000	17.6635	17.6635	4.6000e-004	4.5000e-004	17.8105
Total	**8.1900e-003**	**0.1212**	**0.0983**	**6.9000e-004**	**0.0368**	**8.2000e-004**	**0.0376**	**9.9200e-003**	**7.8000e-004**	**0.0107**	**0.0000**	**67.3794**	**67.3794**	**3.1300e-003**	**8.3000e-003**	**69.9317**

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					0.0105	0.0000	0.0105	1.1300e-003	0.0000	1.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0324	0.3670	0.2799	6.0000e-004		0.0142	0.0142		0.0130	0.0130	0.0000	53.0074	53.0074	0.0171	0.0000	53.4360
Total	**0.0324**	**0.3670**	**0.2799**	**6.0000e-004**	**0.0105**	**0.0142**	**0.0246**	**1.1300e-003**	**0.0130**	**0.0142**	**0.0000**	**53.0074**	**53.0074**	**0.0171**	**0.0000**	**53.4360**

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3.3 Grading - 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	1.6900e-003	0.1100	0.0280	4.7000e-004	0.0138	6.6000e-004	0.0144	3.7800e-003	6.3000e-004	4.4100e-003	0.0000	46.6616	46.6616	2.5700e-003	7.4100e-003	48.9340
Vendor	1.5000e-004	6.1500e-003	1.9200e-003	3.0000e-005	1.0900e-003	3.0000e-005	1.1300e-003	3.2000e-004	3.0000e-005	3.5000e-004	0.0000	3.0543	3.0543	1.0000e-004	4.4000e-004	3.1873
Worker	6.3500e-003	5.0400e-003	0.0683	1.9000e-004	0.0219	1.3000e-004	0.0221	5.8200e-003	1.2000e-004	5.9500e-003	0.0000	17.6635	17.6635	4.6000e-004	4.5000e-004	17.8105
Total	**8.1900e-003**	**0.1212**	**0.0983**	**6.9000e-004**	**0.0368**	**8.2000e-004**	**0.0376**	**9.9200e-003**	**7.8000e-004**	**0.0107**	**0.0000**	**67.3794**	**67.3794**	**3.1300e-003**	**8.3000e-003**	**69.9317**

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	0.0331	0.3846	0.4787	8.1000e-004		0.0148	0.0148		0.0136	0.0136	0.0000	71.0415	71.0415	0.0230	0.0000	71.6160
Total	**0.0331**	**0.3846**	**0.4787**	**8.1000e-004**		**0.0148**	**0.0148**		**0.0136**	**0.0136**	**0.0000**	**71.0415**	**71.0415**	**0.0230**	**0.0000**	**71.6160**

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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	1.6300e-003	0.0580	0.0217	2.7000e-004	9.0800e-003	2.8000e-004	9.3500e-003	2.6200e-003	2.7000e-004	2.8900e-003	0.0000	26.1824	26.1824	8.8000e-004	3.7700e-003	27.3272
Worker	0.0429	0.0340	0.4612	1.2800e-003	0.1479	9.1000e-004	0.1488	0.0393	8.4000e-004	0.0401	0.0000	119.2288	119.2288	3.1300e-003	3.0700e-003	120.2205
Total	**0.0445**	**0.0921**	**0.4829**	**1.5500e-003**	**0.1570**	**1.1900e-003**	**0.1582**	**0.0419**	**1.1100e-003**	**0.0430**	**0.0000**	**145.4112**	**145.4112**	**4.0100e-003**	**6.8400e-003**	**147.5477**

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	0.0331	0.3846	0.4786	8.1000e-004		0.0148	0.0148		0.0136	0.0136	0.0000	71.0415	71.0415	0.0230	0.0000	71.6159
Total	**0.0331**	**0.3846**	**0.4786**	**8.1000e-004**		**0.0148**	**0.0148**		**0.0136**	**0.0136**	**0.0000**	**71.0415**	**71.0415**	**0.0230**	**0.0000**	**71.6159**

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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	1.6300e-003	0.0580	0.0217	2.7000e-004	9.0800e-003	2.8000e-004	9.3500e-003	2.6200e-003	2.7000e-004	2.8900e-003	0.0000	26.1824	26.1824	8.8000e-004	3.7700e-003	27.3272
Worker	0.0429	0.0340	0.4612	1.2800e-003	0.1479	9.1000e-004	0.1488	0.0393	8.4000e-004	0.0401	0.0000	119.2288	119.2288	3.1300e-003	3.0700e-003	120.2205
Total	**0.0445**	**0.0921**	**0.4829**	**1.5500e-003**	**0.1570**	**1.1900e-003**	**0.1582**	**0.0419**	**1.1100e-003**	**0.0430**	**0.0000**	**145.4112**	**145.4112**	**4.0100e-003**	**6.8400e-003**	**147.5477**

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	0.0923	1.0591	1.3890	2.3600e-003		0.0389	0.0389		0.0358	0.0358	0.0000	206.8287	206.8287	0.0669	0.0000	208.5010
Total	**0.0923**	**1.0591**	**1.3890**	**2.3600e-003**		**0.0389**	**0.0389**		**0.0358**	**0.0358**	**0.0000**	**206.8287**	**206.8287**	**0.0669**	**0.0000**	**208.5010**

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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	4.5900e-003	0.1693	0.0619	7.7000e-004	0.0264	8.2000e-004	0.0272	7.6300e-003	7.8000e-004	8.4100e-003	0.0000	75.0763	75.0763	2.5600e-003	0.0108	78.3631
Worker	0.1164	0.0884	1.2506	3.6300e-003	0.4307	2.5400e-003	0.4332	0.1144	2.3400e-003	0.1167	0.0000	339.9568	339.9568	8.2600e-003	8.2900e-003	342.6348
Total	**0.1210**	**0.2577**	**1.3125**	**4.4000e-003**	**0.4571**	**3.3600e-003**	**0.4604**	**0.1220**	**3.1200e-003**	**0.1251**	**0.0000**	**415.0331**	**415.0331**	**0.0108**	**0.0191**	**420.9979**

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	0.0923	1.0591	1.3890	2.3600e-003		0.0389	0.0389		0.0358	0.0358	0.0000	206.8285	206.8285	0.0669	0.0000	208.5008
Total	**0.0923**	**1.0591**	**1.3890**	**2.3600e-003**		**0.0389**	**0.0389**		**0.0358**	**0.0358**	**0.0000**	**206.8285**	**206.8285**	**0.0669**	**0.0000**	**208.5008**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	4.5900e-003	0.1693	0.0619	7.7000e-004	0.0264	8.2000e-004	0.0272	7.6300e-003	7.8000e-004	8.4100e-003	0.0000	75.0763	75.0763	2.5600e-003	0.0108	78.3631
Worker	0.1164	0.0884	1.2506	3.6300e-003	0.4307	2.5400e-003	0.4332	0.1144	2.3400e-003	0.1167	0.0000	339.9568	339.9568	8.2600e-003	8.2900e-003	342.6348
Total	**0.1210**	**0.2577**	**1.3125**	**4.4000e-003**	**0.4571**	**3.3600e-003**	**0.4604**	**0.1220**	**3.1200e-003**	**0.1251**	**0.0000**	**415.0331**	**415.0331**	**0.0108**	**0.0191**	**420.9979**

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	0.0209	0.2374	0.3325	5.7000e-004		8.2200e-003	8.2200e-003		7.5600e-003	7.5600e-003	0.0000	49.7455	49.7455	0.0161	0.0000	50.1477
Total	**0.0209**	**0.2374**	**0.3325**	**5.7000e-004**		**8.2200e-003**	**8.2200e-003**		**7.5600e-003**	**7.5600e-003**	**0.0000**	**49.7455**	**49.7455**	**0.0161**	**0.0000**	**50.1477**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.0700e-003	0.0405	0.0146	1.8000e-004	6.3500e-003	2.0000e-004	6.5500e-003	1.8300e-003	1.9000e-004	2.0200e-003	0.0000	17.7279	17.7279	6.2000e-004	2.5600e-003	18.5049
Worker	0.0262	0.0191	0.2804	8.4000e-004	0.1036	5.8000e-004	0.1041	0.0275	5.4000e-004	0.0280	0.0000	79.7520	79.7520	1.7900e-003	1.8600e-003	80.3517
Total	**0.0273**	**0.0596**	**0.2950**	**1.0200e-003**	**0.1099**	**7.8000e-004**	**0.1107**	**0.0293**	**7.3000e-004**	**0.0301**	**0.0000**	**97.4799**	**97.4799**	**2.4100e-003**	**4.4200e-003**	**98.8566**

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	0.0209	0.2374	0.3325	5.7000e-004		8.2200e-003	8.2200e-003		7.5600e-003	7.5600e-003	0.0000	49.7454	49.7454	0.0161	0.0000	50.1476
Total	**0.0209**	**0.2374**	**0.3325**	**5.7000e-004**		**8.2200e-003**	**8.2200e-003**		**7.5600e-003**	**7.5600e-003**	**0.0000**	**49.7454**	**49.7454**	**0.0161**	**0.0000**	**50.1476**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.0700e-003	0.0405	0.0146	1.8000e-004	6.3500e-003	2.0000e-004	6.5500e-003	1.8300e-003	1.9000e-004	2.0200e-003	0.0000	17.7279	17.7279	6.2000e-004	2.5600e-003	18.5049
Worker	0.0262	0.0191	0.2804	8.4000e-004	0.1036	5.8000e-004	0.1041	0.0275	5.4000e-004	0.0280	0.0000	79.7520	79.7520	1.7900e-003	1.8600e-003	80.3517
Total	**0.0273**	**0.0596**	**0.2950**	**1.0200e-003**	**0.1099**	**7.8000e-004**	**0.1107**	**0.0293**	**7.3000e-004**	**0.0301**	**0.0000**	**97.4799**	**97.4799**	**2.4100e-003**	**4.4200e-003**	**98.8566**

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	6.3100e-003	0.0614	0.0945	1.4000e-004		2.9700e-003	2.9700e-003		2.7400e-003	2.7400e-003	0.0000	12.5734	12.5734	4.0700e-003	0.0000	12.6751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.3100e-003**	**0.0614**	**0.0945**	**1.4000e-004**		**2.9700e-003**	**2.9700e-003**		**2.7400e-003**	**2.7400e-003**	**0.0000**	**12.5734**	**12.5734**	**4.0700e-003**	**0.0000**	**12.6751**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.9000e-004	7.1100e-003	2.6000e-003	3.0000e-005	1.1100e-003	3.0000e-005	1.1400e-003	3.2000e-004	3.0000e-005	3.5000e-004	0.0000	3.1521	3.1521	1.1000e-004	4.5000e-004	3.2901
Worker	1.3000e-003	9.9000e-004	0.0140	4.0000e-005	4.8200e-003	3.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	3.8061	3.8061	9.0000e-005	9.0000e-005	3.8361
Total	**1.4900e-003**	**8.1000e-003**	**0.0166**	**7.0000e-005**	**5.9300e-003**	**6.0000e-005**	**5.9900e-003**	**1.6000e-003**	**6.0000e-005**	**1.6600e-003**	**0.0000**	**6.9582**	**6.9582**	**2.0000e-004**	**5.4000e-004**	**7.1262**

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	6.3100e-003	0.0614	0.0945	1.4000e-004		2.9700e-003	2.9700e-003		2.7400e-003	2.7400e-003	0.0000	12.5734	12.5734	4.0700e-003	0.0000	12.6750
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.3100e-003**	**0.0614**	**0.0945**	**1.4000e-004**		**2.9700e-003**	**2.9700e-003**		**2.7400e-003**	**2.7400e-003**	**0.0000**	**12.5734**	**12.5734**	**4.0700e-003**	**0.0000**	**12.6750**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.9000e-004	7.1100e-003	2.6000e-003	3.0000e-005	1.1100e-003	3.0000e-005	1.1400e-003	3.2000e-004	3.0000e-005	3.5000e-004	0.0000	3.1521	3.1521	1.1000e-004	4.5000e-004	3.2901
Worker	1.3000e-003	9.9000e-004	0.0140	4.0000e-005	4.8200e-003	3.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	3.8061	3.8061	9.0000e-005	9.0000e-005	3.8361
Total	**1.4900e-003**	**8.1000e-003**	**0.0166**	**7.0000e-005**	**5.9300e-003**	**6.0000e-005**	**5.9900e-003**	**1.6000e-003**	**6.0000e-005**	**1.6600e-003**	**0.0000**	**6.9582**	**6.9582**	**2.0000e-004**	**5.4000e-004**	**7.1262**

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	0.0167	0.1591	0.2698	4.1000e-004		7.4300e-003	7.4300e-003		6.8300e-003	6.8300e-003	0.0000	36.0039	36.0039	0.0116	0.0000	36.2951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0167**	**0.1591**	**0.2698**	**4.1000e-004**		**7.4300e-003**	**7.4300e-003**		**6.8300e-003**	**6.8300e-003**	**0.0000**	**36.0039**	**36.0039**	**0.0116**	**0.0000**	**36.2951**

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	5.4000e-004	0.0203	7.3100e-003	9.0000e-005	3.1800e-003	1.0000e-004	3.2700e-003	9.2000e-004	9.0000e-005	1.0100e-003	0.0000	8.8640	8.8640	3.1000e-004	1.2800e-003	9.2525
Worker	3.5000e-003	2.5500e-003	0.0374	1.1000e-004	0.0138	8.0000e-005	0.0139	3.6700e-003	7.0000e-005	3.7400e-003	0.0000	10.6336	10.6336	2.4000e-004	2.5000e-004	10.7136
Total	**4.0400e-003**	**0.0228**	**0.0447**	**2.0000e-004**	**0.0170**	**1.8000e-004**	**0.0172**	**4.5900e-003**	**1.6000e-004**	**4.7500e-003**	**0.0000**	**19.4976**	**19.4976**	**5.5000e-004**	**1.5300e-003**	**19.9660**

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	0.0167	0.1591	0.2698	4.1000e-004		7.4300e-003	7.4300e-003		6.8300e-003	6.8300e-003	0.0000	36.0039	36.0039	0.0116	0.0000	36.2950
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0167**	**0.1591**	**0.2698**	**4.1000e-004**		**7.4300e-003**	**7.4300e-003**		**6.8300e-003**	**6.8300e-003**	**0.0000**	**36.0039**	**36.0039**	**0.0116**	**0.0000**	**36.2950**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	5.4000e-004	0.0203	7.3100e-003	9.0000e-005	3.1800e-003	1.0000e-004	3.2700e-003	9.2000e-004	9.0000e-005	1.0100e-003	0.0000	8.8640	8.8640	3.1000e-004	1.2800e-003	9.2525
Worker	3.5000e-003	2.5500e-003	0.0374	1.1000e-004	0.0138	8.0000e-005	0.0139	3.6700e-003	7.0000e-005	3.7400e-003	0.0000	10.6336	10.6336	2.4000e-004	2.5000e-004	10.7136
Total	**4.0400e-003**	**0.0228**	**0.0447**	**2.0000e-004**	**0.0170**	**1.8000e-004**	**0.0172**	**4.5900e-003**	**1.6000e-004**	**4.7500e-003**	**0.0000**	**19.4976**	**19.4976**	**5.5000e-004**	**1.5300e-003**	**19.9660**

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	0.1066					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3600e-003	0.0326	0.0518	8.0000e-005		1.4400e-003	1.4400e-003		1.4300e-003	1.4300e-003	0.0000	7.2305	7.2305	8.4000e-004	0.0000	7.2515
Total	**0.1109**	**0.0326**	**0.0518**	**8.0000e-005**		**1.4400e-003**	**1.4400e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**7.2305**	**7.2305**	**8.4000e-004**	**0.0000**	**7.2515**

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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	0.0000	0.0000	0.0000	0.0000	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	1.3000e-003	9.9000e-004	0.0140	4.0000e-005	4.8200e-003	3.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	3.8061	3.8061	9.0000e-005	9.0000e-005	3.8361
Total	**1.3000e-003**	**9.9000e-004**	**0.0140**	**4.0000e-005**	**4.8200e-003**	**3.0000e-005**	**4.8500e-003**	**1.2800e-003**	**3.0000e-005**	**1.3100e-003**	**0.0000**	**3.8061**	**3.8061**	**9.0000e-005**	**9.0000e-005**	**3.8361**

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	0.1066					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3600e-003	0.0326	0.0518	8.0000e-005		1.4400e-003	1.4400e-003		1.4300e-003	1.4300e-003	0.0000	7.2305	7.2305	8.4000e-004	0.0000	7.2515
Total	**0.1109**	**0.0326**	**0.0518**	**8.0000e-005**		**1.4400e-003**	**1.4400e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**7.2305**	**7.2305**	**8.4000e-004**	**0.0000**	**7.2515**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0000	0.0000	0.0000	0.0000	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	1.3000e-003	9.9000e-004	0.0140	4.0000e-005	4.8200e-003	3.0000e-005	4.8500e-003	1.2800e-003	3.0000e-005	1.3100e-003	0.0000	3.8061	3.8061	9.0000e-005	9.0000e-005	3.8361
Total	**1.3000e-003**	**9.9000e-004**	**0.0140**	**4.0000e-005**	**4.8200e-003**	**3.0000e-005**	**4.8500e-003**	**1.2800e-003**	**3.0000e-005**	**1.3100e-003**	**0.0000**	**3.8061**	**3.8061**	**9.0000e-005**	**9.0000e-005**	**3.8361**

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	0.3052					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0885	0.1481	2.4000e-004		3.5200e-003	3.5200e-003		3.5000e-003	3.5000e-003	0.0000	20.7056	20.7056	2.3700e-003	0.0000	20.7649
Total	**0.3170**	**0.0885**	**0.1481**	**2.4000e-004**		**3.5200e-003**	**3.5200e-003**		**3.5000e-003**	**3.5000e-003**	**0.0000**	**20.7056**	**20.7056**	**2.3700e-003**	**0.0000**	**20.7649**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0000	0.0000	0.0000	0.0000	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	3.5000e-003	2.5500e-003	0.0374	1.1000e-004	0.0138	8.0000e-005	0.0139	3.6700e-003	7.0000e-005	3.7400e-003	0.0000	10.6336	10.6336	2.4000e-004	2.5000e-004	10.7136
Total	**3.5000e-003**	**2.5500e-003**	**0.0374**	**1.1000e-004**	**0.0138**	**8.0000e-005**	**0.0139**	**3.6700e-003**	**7.0000e-005**	**3.7400e-003**	**0.0000**	**10.6336**	**10.6336**	**2.4000e-004**	**2.5000e-004**	**10.7136**

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	0.3052					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0885	0.1481	2.4000e-004		3.5200e-003	3.5200e-003		3.5000e-003	3.5000e-003	0.0000	20.7056	20.7056	2.3700e-003	0.0000	20.7649
Total	**0.3170**	**0.0885**	**0.1481**	**2.4000e-004**		**3.5200e-003**	**3.5200e-003**		**3.5000e-003**	**3.5000e-003**	**0.0000**	**20.7056**	**20.7056**	**2.3700e-003**	**0.0000**	**20.7649**

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	0.0000	0.0000	0.0000	0.0000	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	3.5000e-003	2.5500e-003	0.0374	1.1000e-004	0.0138	8.0000e-005	0.0139	3.6700e-003	7.0000e-005	3.7400e-003	0.0000	10.6336	10.6336	2.4000e-004	2.5000e-004	10.7136
Total	**3.5000e-003**	**2.5500e-003**	**0.0374**	**1.1000e-004**	**0.0138**	**8.0000e-005**	**0.0139**	**3.6700e-003**	**7.0000e-005**	**3.7400e-003**	**0.0000**	**10.6336**	**10.6336**	**2.4000e-004**	**2.5000e-004**	**10.7136**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1229	0.1342	1.2301	2.6500e-003	0.2893	1.9600e-003	0.2913	0.0772	1.8200e-003	0.0790	0.0000	251.7184	251.7184	0.0174	0.0109	255.3900
Unmitigated	0.1229	0.1342	1.2301	2.6500e-003	0.2893	1.9600e-003	0.2913	0.0772	1.8200e-003	0.0790	0.0000	251.7184	251.7184	0.0174	0.0109	255.3900

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unenclosed Parking with Elevator	0.00	0.00	0.00		
University/College (4yr)	299.04	299.04	0.00	769,956	769,956
Total	299.04	299.04	0.00	769,956	769,956

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
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
University/College (4yr)	16.60	8.40	6.90	6.40	88.60	5.00	91	9	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unenclosed Parking with Elevator	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
University/College (4yr)	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 Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	298.0645	298.0645	0.0142	1.7200e-003	298.9333
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	331.1828	331.1828	0.0158	1.9100e-003	332.1481
NaturalGas Mitigated	0.0145	0.1315	0.1104	7.9000e-004		9.9900e-003	9.9900e-003		9.9900e-003	9.9900e-003	0.0000	143.1217	143.1217	2.7400e-003	2.6200e-003	143.9722
NaturalGas Unmitigated	0.0145	0.1315	0.1104	7.9000e-004		9.9900e-003	9.9900e-003		9.9900e-003	9.9900e-003	0.0000	143.1217	143.1217	2.7400e-003	2.6200e-003	143.9722

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Unenclosed Parking with Elevator	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
University/College (4yr)	2.682e+006	0.0145	0.1315	0.1104	7.9000e-004		9.9900e-003	9.9900e-003		9.9900e-003	9.9900e-003	0.0000	143.1217	143.1217	2.7400e-003	2.6200e-003	143.9722
Total		**0.0145**	**0.1315**	**0.1104**	**7.9000e-004**		**9.9900e-003**	**9.9900e-003**		**9.9900e-003**	**9.9900e-003**	**0.0000**	**143.1217**	**143.1217**	**2.7400e-003**	**2.6200e-003**	**143.9722**

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					
Unenclosed Parking with Elevator	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
University/College (4yr)	2.682e+006	0.0145	0.1315	0.1104	7.9000e-004		9.9900e-003	9.9900e-003		9.9900e-003	9.9900e-003	0.0000	143.1217	143.1217	2.7400e-003	2.6200e-003	143.9722
Total		**0.0145**	**0.1315**	**0.1104**	**7.9000e-004**		**9.9900e-003**	**9.9900e-003**		**9.9900e-003**	**9.9900e-003**	**0.0000**	**143.1217**	**143.1217**	**2.7400e-003**	**2.6200e-003**	**143.9722**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unenclosed Parking with Elevator	86136	27.0361	1.2900e-003	1.6000e-004	27.1149
University/College (4yr)	969000	304.1467	0.0145	1.7600e-003	305.0332
Total		**331.1828**	**0.0158**	**1.9200e-003**	**332.1481**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unenclosed Parking with Elevator	77522.4	24.3325	1.1600e-003	1.4000e-004	24.4034
University/College (4yr)	872100	273.7320	0.0131	1.5800e-003	274.5299
Total		**298.0645**	**0.0142**	**1.7200e-003**	**298.9333**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.4058	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Unmitigated	0.4058	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-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	0.0412					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Total	**0.4058**	**4.0000e-005**	**4.4700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7100e-003**	**8.7100e-003**	**2.0000e-005**	**0.0000**	**9.2800e-003**

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	0.0412					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Total	**0.4058**	**4.0000e-005**	**4.4700e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7100e-003**	**8.7100e-003**	**2.0000e-005**	**0.0000**	**9.2800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.4423	0.0136	3.4000e-004	4.8841
Unmitigated	5.0660	0.0170	4.2000e-004	5.6167

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
University/College (4yr)	0.513864 / 0.803736	5.0660	0.0170	4.2000e-004	5.6167
Total		**5.0660**	**0.0170**	**4.2000e-004**	**5.6167**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
University/College (4yr)	0.411091 / 0.754708	4.4423	0.0136	3.4000e-004	4.8841
Total		**4.4423**	**0.0136**	**3.4000e-004**	**4.8841**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.8910	0.5254	0.0000	22.0271
Unmitigated	8.8910	0.5254	0.0000	22.0271

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
University/College (4yr)	43.8	8.8910	0.5254	0.0000	22.0271
Total		**8.8910**	**0.5254**	**0.0000**	**22.0271**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
University/College (4yr)	43.8	8.8910	0.5254	0.0000	22.0271
Total		**8.8910**	**0.5254**	**0.0000**	**22.0271**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

CONSTRUCTION ENERGY

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Demolition	Demolition	3/6/2023	4/7/2023	5	25
2	Grading	Grading	4/10/2023	8/25/2023	5	100
3	Building Construction	Building Construction	8/28/2023	3/28/2025	5	415
4	Paving	Paving	12/2/2024	3/28/2025	5	85
5	Architectural Coating	Architectural Coating	12/2/2024	3/28/2025	5	85

Diesel Equipment			gal/bhp-hr	**USEPA 2020 Fuel**	
HP>100	BSFC (lb/hp-hr)	0.367	0.051625427	kgCO2/gal-D	10.21
HP<100	BSFC (lb/hp-hr)	0.408	0.057392846	kgCO2/gal-G	8.78
				lbCO2/gal-G	19.36

		Phase	**Vehicle**	**lbCO2/day**	**days**	**gallons**	**fuel**
Demolition	Hauling	514.67		25	571.6	D
Demolition	Vendor	67.3749		25	74.8	D
Demolition	Worker	191.8453		25	247.8	G
Grading	Hauling	1,029.34		100	4,573.0	D
Grading	Vendor	67.3749		100	299.3	D
Grading	Worker	383.6907		100	1,982.2	G
Building Construction	Hauling	0		415	0.0	D
Building Construction	Vendor	641.985		415	11,836.2	D
Building Construction	Worker	2,877.68		415	61,696.8	G
Paving	Hauling	0		85	0.0	D
Paving	Vendor	316.1829		85	1,194.0	D
Paving	Worker	375.816		85	1,650.3	G
Architectural Coating	Hauling	0		85	0.0	D
Architectural Coating	Vendor	0		85	0.0	D
Architectural Coating	Worker	375.816		85	1,650.3	G

LDA/LDT	Gasoline	67,227.4
MHDT/HHDT	Diesel	18,549.0
Equipment	Diesel	388,026.6

CONSTRUCTION ENERGY

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Days	BSFC (gal/hp-hr)	gallons
Demolition	Graders	1	6	187	0.41	25	0.367	4,220.7
Demolition	Tractors/Loaders/Backhoes	2	7	97	0.37	25	0.408	5,125.1
Grading	Graders	1	8	187	0.41	100	0.367	22,510.3
Grading	Tractors/Loaders/Backhoes	2	7	97	0.37	100	0.408	20,500.4
Building Construction	Aerial Lifts	2	7	63	0.31	415	0.408	46,295.5
Building Construction	Cranes	1	6	231	0.29	415	0.367	61,217.5
Building Construction	Rough Terrain Forklifts	2	7	100	0.4	415	0.408	94,819.2
Building Construction	Tractors/Loaders/Backhoes	2	6	97	0.37	415	0.408	72,922.7
Paving	Pavers	1	6	130	0.42	85	0.367	10,219.5
Paving	Paving Equipment	1	8	132	0.36	85	0.367	11,859.1
Paving	Rollers	1	7	80	0.38	85	0.408	7,379.9
Paving	Tractors/Loaders/Backhoe	1	8	97	0.37	85	0.408	9,957.3
Architectural Coating	Air Compressors	2	6	78	0.48	85	0.408	15,581.0
Architectural Coating	Aerial Lifts	2	4	63	0.31	85	0.408	5,418.4
								388,026.6

	OPERATIONAL	ENERGY	
Ops-Mobile	lbCO2/day	days/year	annual gallons of gasoline
	1,760.06	312	28,369.7

Electricity

Land Use	kWh/yr
Unenclosed Parking with Elevator	77522.4
University/College (4yr)	872100
	949.6224

Nat Gas

Land Use	MMBTU/year
Unenclosed Parking with Elevator	0
University/College (4yr)	2,682,000.0

	kWh/Mmgal			
Water Electricity	**Supply Water**	**Treat Water**	**Distribute Water**	**Wastewater Treatment**
	9727	111	1272	1911

	Indoor	Outdoor	Total
Water Use (gal/year)	411,091	754,708	1,165,799
Wastewater (gal/year)	411,091		
Electricity (MWh/year)	13.7		
	963.4		

Appendix B

Noise and Vibration Calculations

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

Construction Noise Analysis

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	**84.2**
Site Preparation	
Grader	81
Backhoe	73.6
Dozer	77.7
Site Preparation Combined	**83.2**
Grading	
Grader	81
Backhoe	73.6
Dozer	77.7
Grading Combined	**83.2**
Building Construction	
Crane	72.6
Generator	77.6
Gradall	79.4
Backhoe	73.6
Welder	70
Building Construction Combined	**82.9**
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, 2008

Construction: Resulting Noise Level Increases								
Sensitive Receptor	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**County Threshold**	**Exceed Threshold?**	**Noise Level Change**
Building Project Site (Proposed Health Professions Education Building) - HPEB								
(Site 2) King Drew Magnet High School to the west	50	0	84.2	84.2	58.3	70.0	Yes	14.2
(Site 3) Residences to the northwest	120	0	84.2	76.6	53.7	65.0	Yes	11.6
(Site 1) Augustus F. Hawkins Mental Health Center to the southeast	300	0	84.2	68.6	63.6	70.0	No	-1.4
(Site 1) Martin Luther King Jr. Community Hospital to the south	400	0	84.2	66.1	63.6	70.0	No	-3.9
(Site 4) Residences to the West	590	9	84.2	53.8	67.4	60.0	No	-6.2
Proposed Parking Structure								
Residences to the northeast along E. 117th St.	50	0	84.2	84.2	67.4	65.0	Yes	19.2
Residences to the east along E. 118th St.	120	0	84.2	76.6	60.4	65.0	Yes	11.6
Residences to the northeast along E. 117th St.	220	4.5	84.2	66.8	67.4	60.0	Yes	6.8
(Site 6) Residences to the east along E. 118th St.	280	4.5	84.2	64.7	60.4	65.0	No	-0.3

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

Mitigated Construction: Resulting Noise Level Increases										
Sensitive Receptor	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Mitigation Measure /b/**	**Mitigation /b/**	**Mitigated Noise Level**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**County Threshold**	**Exceed Threshold?**
Building Project Site (Proposed Health Professions Education Building) - HPEB										
(Site 2) King Drew Magnet High School to the west	50	0	84.2	N1, N2	15	69.2	69.2	58.3	70.0	No
(Site 3) Residences to the northwest	120	0	84.2	N1, N2	15	69.2	61.6	53.7	65.0	No
(Site 1) Augustus F. Hawkins Mental Health Center to the southeast	300	0	84.2	N1, N2	5	79.2	63.6	63.6	70.0	No
(Site 1) Martin Luther King Jr. Community Hospital to the south	400	0	84.2	N1, N2	5	79.2	61.1	63.6	70.0	No
(Site 4) Residences to the West	590	9	84.2	N1, N2	5	79.2	48.8	67.4	60.0	No
Proposed Parking Structure										
Residences to the northeast along E. 117th St.	50	0	84.2	N1, N3	20	64.2	64.2	67.4	65.0	No
Residences to the east along E. 118th St.	120	0	84.2	N1, N3	20	64.2	56.6	60.4	65.0	No
Residences to the northeast along E. 117th St.	220	4.5	84.2	N1, N3	20	64.2	46.8	67.4	60.0	No
(Site 6) Residences to the east along E. 118th St.	280	4.5	84.2	N1, N3	20	64.2	44.7	60.4	65.0	No

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

/b/ Mitigation Measures N1 Includes a 5 dB reduction for equipment mufflers,
Mitigation Measure N2 includes a 10 dB reduction for a temporary noise barrier,
Mitigation Measure N3 includes a 15 dB reduction for a temporary noise barrier.

Operational Noise - New Operational Noise Standards					
Sensitive Receptors	**Distance to Construction (Feet)**	**Use**	**Existing Ambient Noise Level (dBA, Leq)**	**County Daytime Noise Standards Based on Use**	**Use Existing Ambient as New Exterior Noise Standards?**
Building Project Site (Proposed Health Professions Education Building) - HPEB					
(Site 2) King Drew Magnet High School to the west	50	Noise Sensitive	58.3	50	Yes
(Site 3) Residences to the northwest	120	Residential	53.7	50	Yes
(Site 1) Augustus F. Hawkins Mental Health Center to the southeast	300	Commercial	63.6	60	Yes
(Site 1) Martin Luther King Jr. Community Hospital to the south	400	Commercial	63.6	60	Yes
(Site 4) Residences to the West	590	Residential	67.4	50	Yes
Proposed Parking Structure					
Residences to the northeast along E. 117th St.	50	Residential	67.4	50	Yes
Residences to the east along E. 118th St.	120	Residential	60.4	50	Yes
Residences to the northeast along E. 117th St.	220	Residential	67.4	50	Yes
(Site 6) Residences to the east along E. 118th St.	280	Residential	60.4	50	Yes

Operational Noise - HVAC Equipment Noise Level							
Sensitive Receptor	Reference Noise Level (dBA)	HVAC Equipment Noise Level (dBA, Leq) /a/	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Exterior Noise Standards	Exceed Standards?	Noise Level Difference (dBA, Leq)
Building Project Site (Proposed Health Professions Education Building) - HPEB							
(Site 2) King Drew Magnet High School to the west	50	43.9	58.3	58.5	58.3	No	-0.2
(Site 3) Residences to the northwest	50	38.0	53.7	53.8	53.7	No	-0.1
(Site 1) Augustus F. Hawkins Mental Health Center to the southeast	50	36.4	63.6	63.6	63.6	No	0.0
(Site 1) Martin Luther King Jr. Community Hospital to the south	50	37.3	63.6	63.6	63.6	No	0.0
(Site 4) Residences to the West	50	33.4	67.4	67.4	67.4	No	0.0
Residences to the east along E. 118th St.	50	31.0	60.4	60.4	60.4	No	0.0
Proposed Parking Structure							
Not applicable.							

/a/ Noise level calculated using Soundplan.

Project Site Height	Diagonal Distance from Sensitive Receptor to 5th Floor
75	90
75	140
75	310
75	405
75	600

Reference Voice Level (Outdoor Area Noise Level)	
Number of People	Noise Level at 6 feet (dBA)
1	57.8
5	64.8
8	66.8
10	67.8

Operational Noise - Outdoor Operational Noise Levels /a/								
Sensitive Receptor	Distance to HPEB (feet)	Intervening Building	Reference Noise Level (dBA)	Outdoor Noise Level (dBA, Leq) /b/ /c/	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Exterior Noise Standards	Exceed Standards?
Building Project Site (Proposed Health Professions Education Building) - HPEB								
(Site 2) King Drew Magnet High School to the west	50	0	-	0.0	58.3	58.3	58.3	No
(Site 3) Residences to the northwest	120	0	-	22.3	53.7	53.7	53.7	No
(Site 1) Augustus F. Hawkins Mental Health Center to the southeast	300	0	-	26.3	63.6	63.6	63.6	No
(Site 1) Martin Luther King Jr. Community Hospital to the south	400	0	-	22.9	63.6	63.6	63.6	No
(Site 4) Residences to the West	590	9	-	0.0	67.4	67.4	67.4	No
Residences to the east along E. 118th St.	770	4.5	-	20.0	60.4	60.4	60.4	No
Proposed Parking Structure								
Not applicable.								

/a/ takes into account anticipated noise levels received by the ground floor cafe seating area, ground floor amphitheater, and rooftop terrace
/b/ noise level calculated using Soundplan
/c/ for noise levels of 0, Soundplan had indicated that outdoor operational noise will not reach the sensitive receptor

Parking Activity Noise Level	
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)	Number of Average Peak Hour Trips
41.0	29

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment* , September 2018

Operational Noise - Parking Activity								
Sensitive Receptor	Distance	Intervening Building	Reference Noise Level (dBA)	Parking Activity Noise Level (dBA, Leq)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Exterior Noise Standards	Exceed Standards?
Building Project Site (Proposed Health Professions Education Building) - HPEB								
Not applicable.								
Proposed Parking Structure								
Residences to the northeast along E. 117th St.	50	0	41.0	41.0	67.4	67.4	67.4	No
Residences to the east along E. 118th St.	120	0	41.0	33.4	60.4	60.4	60.4	No
Residences to the northeast along E. 117th St.	220	4.5	41.0	23.6	67.4	67.4	67.4	No
(Site 6) Residences to the east along E. 118th St.	280	4.5	41.0	21.5	60.4	60.4	60.4	No

Estimated Mobile Source Noise Levels (Existing)						
	Estimated Noise Levels (dBA, Leq)			Estimated Noise Levels (dBa, CNEL)		
Roadway Segment	Existing Conditions	Existing Conditions Plus Project	Change	Existing Conditions	Existing Conditions Plus Project	Change
Compton Ave. north of 118th St.	64.1	64.1	0.0	59.2	59.2	0.0
Compton Ave. between 118th St. and 120th St.	64.1	64.1	0.0	59.2	59.2	0.0
Wilmington Ave. north of 118th St.	66.1	66.1	0.0	61.2	61.2	0.0
Wilmington Ave. between 118th St. and 120th St.	65.9	65.9	0.0	61.0	61.0	0.0
118th St. east of Compton Ave.	54.6	54.9	0.3	49.7	50.0	0.3
118th St. west of Wilmington Ave.	56.4	56.5	0.1	51.5	51.6	0.1
120th St. east of Compton Ave.	65.3	65.3	0.0	60.4	60.4	0.0
120th St. west of Wilmington Ave.	64.1	64.1	0.0	59.2	59.2	0.0

Estimated Mobile Source Noise Levels (Opening Year 2023)						
	Estimated Noise Levels (dBA, Leq)			Estimated Noise Levels (dBa, CNEL)		
Roadway Segment	Opening Year 2023 No Project	Opening Year 2023 With Project	Change	Opening Year 2023 No Project	Opening Year 2023 With Project	Change
Compton Ave. north of 118th St.	64.1	64.1	0.0	59.2	59.2	0.0
Compton Ave. between 118th St. and 120th St.	64.1	64.2	0.1	59.2	59.3	0.1
Wilmington Ave. north of 118th St.	66.1	66.1	0.0	61.2	61.2	0.0
Wilmington Ave. between 118th St. and 120th St.	65.9	65.9	0.0	61.0	61.0	0.0
118th St. east of Compton Ave.	54.7	55.0	0.3	49.8	50.1	0.3
118th St. west of Wilmington Ave.	56.5	56.6	0.1	51.6	51.7	0.1
120th St. east of Compton Ave.	65.3	65.3	0.0	60.4	60.4	0.0
120th St. west of Wilmington Ave.	64.1	64.1	0.0	59.2	59.2	0.0

Combined Stationary Source Noise Analysis								
Sensitive Receptor	HVAC Equipment Noise Level (dBA, Leq) /a/	Outdoor Area Noise Level (dBA, Leq) /a/	Parking Activity Noise Level (dBA, Leq) /a/	Combined Noise Level (dBA, Leq)	County Standard		Exceed Standard?	
					Day	Night /b/	Day	Night /b/
Building Project Site (Proposed Health Professions Education Building) - HPEB								
(Site 2) King Drew Magnet High School to the west	43.9	0.0	0.0	43.9	60.0	n/a	No	n/a
(Site 3) Residences to the northwest	38.0	22.3	0.0	38.1	53.7	n/a	No	n/a
(Site 1) Augustus F. Hawkins Mental Health Center to the southeast	36.4	26.3	0.0	36.9	63.6	n/a	No	n/a
(Site 1) Martin Luther King Jr. Community Hospital to the south	37.3	22.9	0.0	37.5	63.6	n/a	No	n/a
(Site 4) Residences to the West	33.4	0.0	0.0	33.4	67.4	n/a	No	n/a
Proposed Parking Structure								
Residences to the northeast along E. 117th St.	0.0	0.0	41.0	41.0	67.4	n/a	No	n/a
Residences to the east along E. 118th St.	31.0	0.0	33.4	35.4	60.4	n/a	No	n/a
Residences to the northeast along E. 117th St.	0.0	0.0	23.6	23.7	67.4	n/a	No	n/a
(Site 6) Residences to the east along E. 118th St.	0.0	0.0	21.5	21.6	60.4	n/a	No	n/a

/a/ Calculated in Soundplan.
/b/ The use of both HPEB and the proposed parking structure would primarily occur during the day and therefore only daytime standards would be [illegible]

SOURCE: TAHA, 2021.

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.

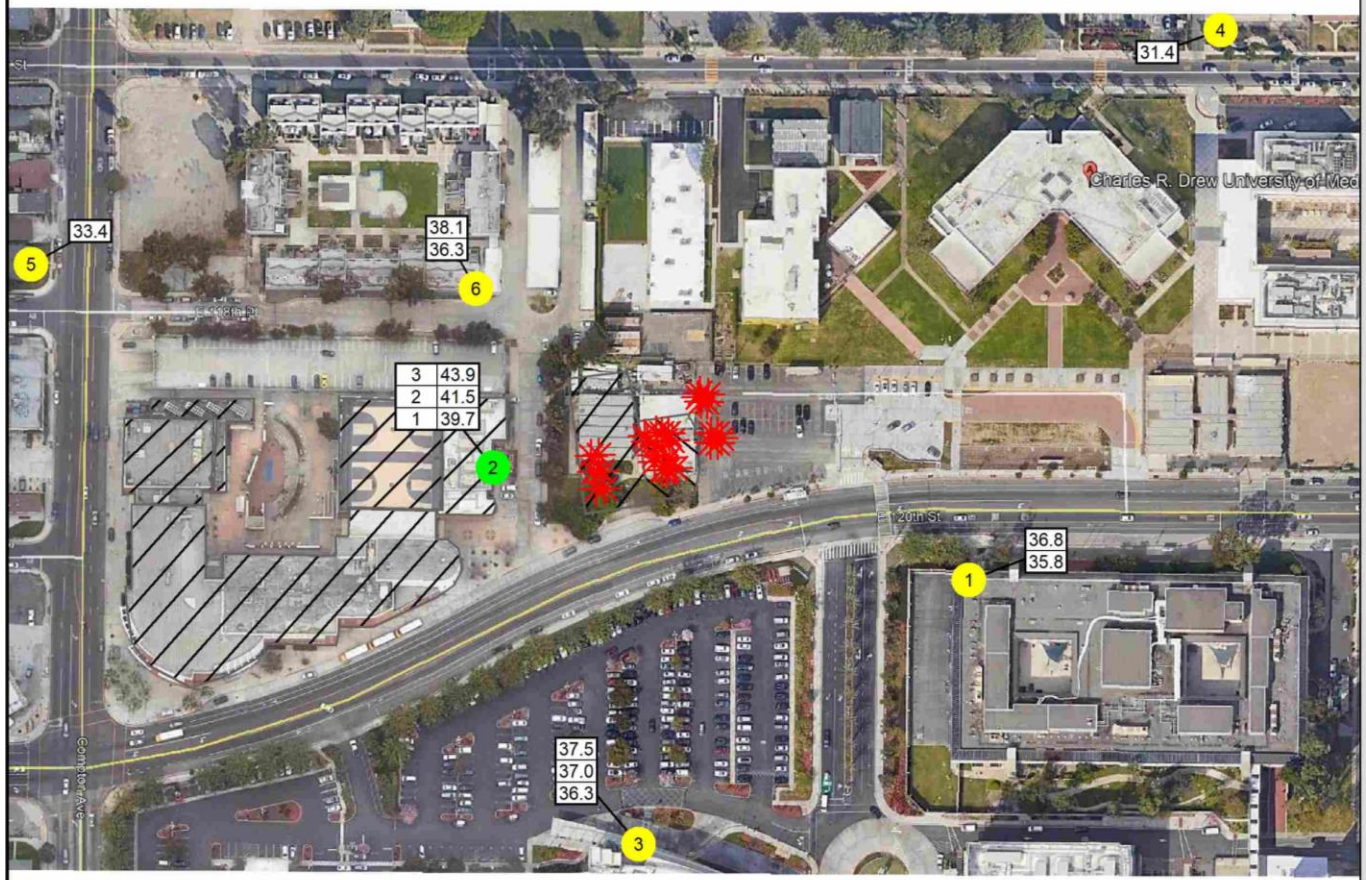
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

Vibration Velocities for Construction Equipment	
Equipment	**Peak Particle Velocity at 25 feet (Inches/Second)**
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

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

Vibration Assessment				
Sensitive Receptor	**Distance (feet)**	**Reference Vibration Level**	**Damage Assessment**	**Perception Threshold**
Building Project Site (Health Professions Education Building)				
(Site 2) King Drew Magnet High School to the west	50	0.089	0.031	0.01
(Site 3) Residences to the northwest	120	0.089	0.008	0.01
(Site 1) Augustus F. Hawkins Mental Health Center to the southeast	300	0.089	0.002	0.01
(Site 1) Martin Luther King Jr. Community Hospital to the south	400	0.089	0.001	0.01
(Site 4) Residences to the West	590	0.089	0.001	0.01
Parking Lot Project Site				
Residences to the northeast along E. 117th St.	50	0.089	0.031	0.01
Residences to the east along E. 118th St.	120	0.089	0.008	0.01
Residences to the northeast along E. 117th St.	220	0.089	0.003	0.01
(Site 6) Residences to the east along E. 118th St.	280	0.089	0.002	0.01

Soundplan Model Runs



Signs and symbols

- Receiver
- Receiver at building
- Calculation area
- Point source

1 : 189

0 45 90 180 270 360 feet

Receiver List

No.	Receiver name	Building side	Floor	Limit				Level				Conflict			
				Leq1	Leq2	Leq3	Lmax	Leq1	Leq2	Leq3	Lmax	Leq1	Leq2	Leq3	Lmax
				dB(A)				dB(A)				dB(A)			
1	August F. Hawkins Menta		GF	-	-	-	-	35.8	-39.0	-39.0	0.0	-	-	-	-
			1.Fl	-	-	-	-	36.8	-38.3	-38.3	0.0	-	-	-	-
2	King Drew Magnet High S	East	GF	-	-	-	-	39.7	-44.8	-44.8	0.0	-	-	-	-
			1.Fl	-	-	-	-	41.5	-43.2	-43.2	0.0	-	-	-	-
			2.Fl	-	-	-	-	43.9	-40.9	-40.9	0.0	-	-	-	-
3	Martin Luther King Jr Hos		GF	-	-	-	-	36.3	-42.2	-42.2	0.0	-	-	-	-
			1.Fl	-	-	-	-	37.0	-41.7	-41.7	0.0	-	-	-	-
			2.Fl	-	-	-	-	37.5	-41.1	-41.1	0.0	-	-	-	-
4	Residences along E 118th		GF	-	-	-	-	31.4	-44.5	-44.5	0.0	-	-	-	-
5	Residences to Northwest		GF	-	-	-	-	33.4	-50.9	-50.9	0.0	-	-	-	-
6	Willowbrook Apts		GF	-	-	-	-	36.3	-42.8	-42.8	0.0	-	-	-	-
			1.Fl	-	-	-	-	38.1	-41.5	-41.5	0.0	-	-	-	-

Traffic Noise Model Runs

Existing Conditions

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	56.4	66	56.4	10	----	56.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Existing Plus Project Conditions

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	54.9	66	54.9	10	----	54.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS **<Project Name?>**

<Organization?> **22 June 2021**
<Analysis By?> **TNM 2.5**
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: **<Project Name?>**
RUN: **<Run Title?>**
BARRIER DESIGN: **INPUT HEIGHTS**
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: **68 deg F, 50% RH**

Receiver												
Name	**No.**	**#DUs**	**Existing**	**No Barrier**					**With Barrier**			
			LAeq1h	**LAeq1h**		**Increase over existing**		**Type**	**Calculated**	**Noise Reduction**		
				Calculated	**Crit'n**	**Calculated**	**Crit'n Sub'l Inc**	**Impact**	**LAeq1h**	**Calculated**	**Goal**	**Calculated minus Goal**
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Opening Year No Project Conditions

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Opening Year Plus Project Conditions

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS **<Project Name?>**

<Organization?> **22 June 2021**
<Analysis By?> **TNM 2.5**
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: **<Project Name?>**
RUN: **<Run Title?>**
BARRIER DESIGN: **INPUT HEIGHTS**
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: **68 deg F, 50% RH**

Receiver												
Name	**No.**	**#DUs**	**Existing**	**No Barrier**					**With Barrier**			
			LAeq1h	**LAeq1h**		**Increase over existing**		**Type**	**Calculated**	**Noise Reduction**		
				Calculated	**Crit'n**	**Calculated**	**Crit'n Sub'l Inc**	**Impact**	**LAeq1h**	**Calculated**	**Goal**	**Calculated minus Goal**
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS **<Project Name?>**

<Organization?> **22 June 2021**
<Analysis By?> **TNM 2.5**
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: **<Project Name?>**
RUN: **<Run Title?>**
BARRIER DESIGN: **INPUT HEIGHTS**
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: **68 deg F, 50% RH**

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>
22 June 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Appendix C

Transportation Impact Analysis

Charles R. Drew University
Health Professions Education Building
Transportation Impact Analysis
Draft Report

September 28, 2022

Submitted to:

11239 | Prepared by **Iteris, Inc.**

Innovating Through Informatics™

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1.0 INTRODUCTION

This report summarizes the results of a transportation impact analysis for the proposed Charles R. Drew University (CDU) Health Professions Education Building (HPEB), located at 1731 East 120th Street-in the Willowbrook area of unincorporated Los Angeles County. This report provides a California Environmental Quality Act (CEQA) and non-CEQA transportation analysis based on the County's latest *Transportation Impact Analysis Guidelines*.

1.1 Project Description

The proposed HPEB project site is a 46,650 square foot parcel comprising one lot located at the southwest corner of the CDU campus. The proposed new building will be located at 1731 East 120th Street, west of Compton Avenue, between a newly constructed CDU APLA Wellness Center to the east and the existing King/Drew Magnet High School of Medicine and Science to the west. The site currently consists of two modular buildings used for offices and facilities. These uses will be moved into other buildings on campus, including facilities and security offices in the proposed HPEB. **Figure 1** illustrates the proposed project site plan.

As part of the new HPEB building, an additional enrollment of 240 students is anticipated. While the new building will be located along 120th Street, it is anticipated that students and employees accessing the site would utilize the current and future CDU parking facilities along 118th Street. The project is located within the Willowbrook Transit Oriented District (TOD) Specific Plan area, approximately 0.42 miles from the Willowbrook/Rosa Parks Metro Station (serving the A Line and C Line).

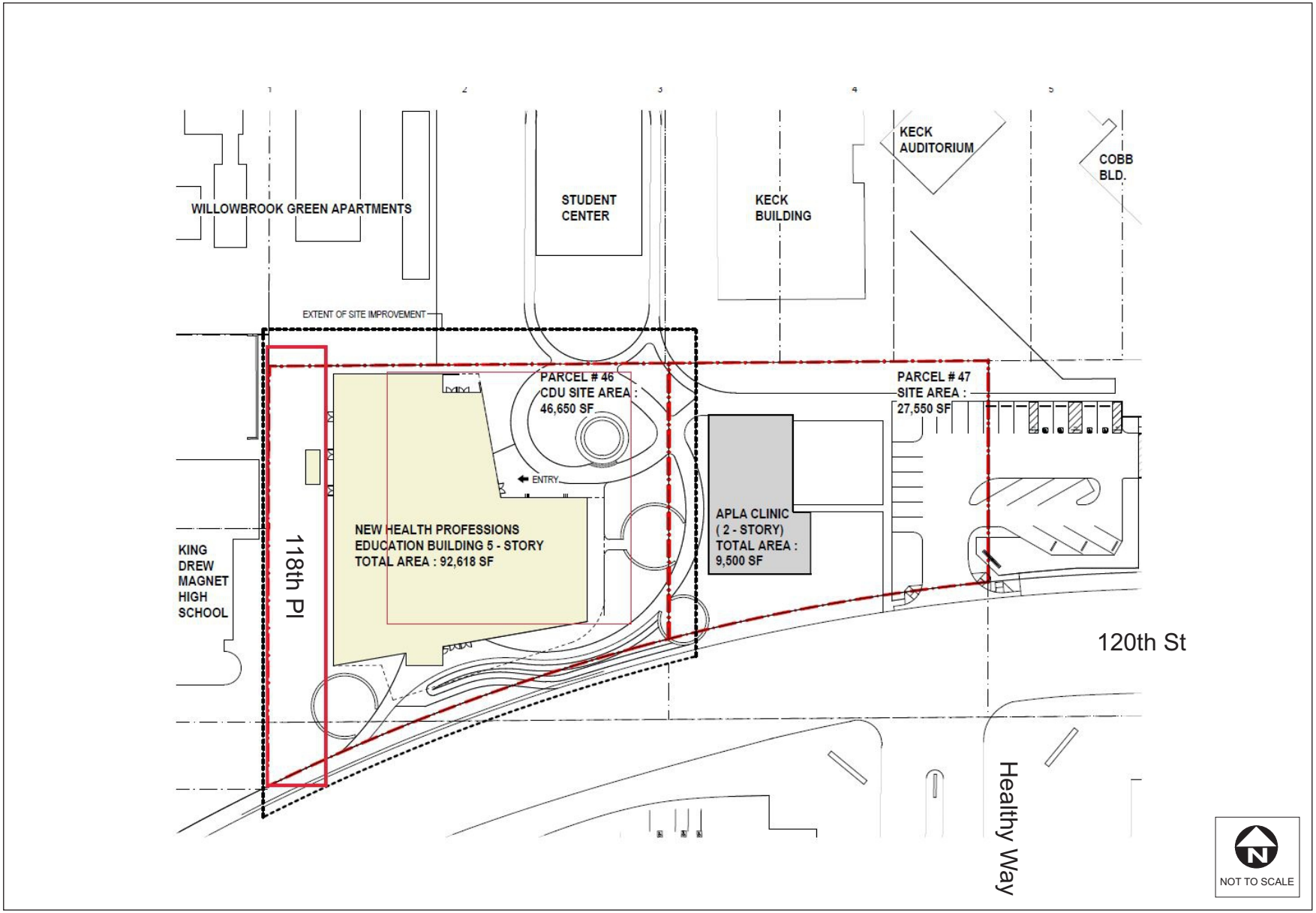

Figure 1
Study Area

2.0 ENVIRONMENTAL SETTING

This section presents an overview of the existing roadway network within the study area.

2.1 Roadway Configurations

The existing configurations of the significant roadways within the study area are described below:

- ***Compton Avenue*** is a four-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 35 mph.

- ***Wilmington Avenue*** is a four to five-lane divided roadway, oriented in a north-south direction, providing access to I-105. On-street parking is provided within the study area and the roadway's posted speed limit is 35 mph.

- ***120th Street*** is a two-lane divided roadway, oriented in an east-west direction. On-street parking is provided within the study area and the roadway's posted speed limit is 35 mph. A Class II bike lane is provided on both sides of the roadway in the vicinity of CDU.

- ***118th Street*** is a two-lane undivided roadway, oriented in an east-west direction, providing access to current and future CDU parking facilities related to the project. On-street parking is provided within the study area and the roadway's posted speed limit is 25 mph.

3.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) TRANSPORTATION ANALYSIS

This section provides the California Environmental Quality Act (CEQA) transportation analysis of the proposed project. The project's impacts are evaluated per Section 15064.3 of the current CEQA guidelines (Appendix G), which requires that projects be assessed for how they would affect 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 project site consists of one parcel being leased from the County of Los Angeles, which is currently part of the existing Charles R. Drew University of Medicine and Science (CDU) campus. The area is surrounded by other Charles R. Drew University buildings, CDU APLA Wellness Center, King Drew Medical Magnet High School, Martin Luther King Community Health Center, other various County and Civic building. To the east, Rosa Parks Metro Station includes the Metro A (Blue) and C (Green) lines, located adjacent to the Kenneth Hahn Shopping Center. The proposed project is consistent with the zoning and policies of the Willowbrook Transit Oriented Development Specific Plan.

The proposed project would not negatively affect the existing bus stops along Compton Avenue, Wilmington, and 120th Street, the sidewalks along 120th Street and 118th Street, nor the Class II bicycle lanes along 120th Street designated in the Los Angeles County Bicycle Master Plan.

Willowbrook Transit Oriented District Specific Plan. The project site is governed by the Willowbrook Transit Oriented District Specific Plan development and design standards. The Specific Plan is intended to facilitate the transformation of the area around the Metro Willowbrook/Rosa Parks Station into a vibrant transit-oriented district, while strengthening its connections to the adjacent residential neighborhoods and the rest of the Willowbrook community. Two mixed use zones are established to facilitate integrated commercial and residential development through optimal site planning and efficient use of land and to promote walking, bicycling, recreation, transit use and community reinvestment. The Specific Plan also presents short and long term land use strategies for the various institutions and facilities in the Specific Plan area, which will be important in achieving the established community goals.

The Specific Plan implemented roadway modifications to enhance pedestrian and bicycle circulation. The roadway modifications in the Specific Plan included the now implemented Road Diet and Bicycle Lanes on 120th Street in the section between Compton Avenue and Wilmington Avenue as part of the Willowbrook Area Access Improvement Project.

The Specific Plan Programmatic Environmental Impact Report (PEIR) included Charles R. Drew University with 49 multi-family housing units and 625 total students with 477,842 square feet of building space in the existing conditions with 119 multi-family housing units and 1,450 students in 772,990 square feet of building space under future conditions. This was a net change of 70 multi-family dwelling units, 825 students, and 295,148 square feet of building space. Trip generation estimates were developed for the CDU Master Plan based on ITE Trip Generation 9th Edition, with adjustment factors appropriate for the CDU campus and a TOD area. The CDU portion of the Specific Plan was forecasted to generate 125 a.m. peak hour trips (4% of total Specific Plan a.m. peak hour trips) and 126 p.m. peak hour trips (3% of total Specific Plan p.m. peak hour trips).

The PEIR Section 3.12 Transportation and Traffic concerned the circulation system in the project area. The section evaluated potential Specific Plan-related impacts at 66 study intersections, ten freeway segments, and ten freeway off-ramps that provide local and regional access to the traffic study area and define the extent of the boundaries for this traffic impact analysis. Investigations at these key locations were used to evaluate potential traffic-related impacts associated with build out of the proposed Specific Plan. The section also provided mitigation measures, where feasible, that would reduce potential impacts from build out of the proposed Specific Plan to be implemented by site specific development applications within the Specific Plan area prior to issuance of a grading permit. Monitoring agencies include the Los Angeles County Department of Regional Planning, City of Compton, City of Los Angeles, and Caltrans.

The **Los Angeles County Bicycle Master Plan** designates a countywide network of bicycle paths, bicycle-lanes, and bicycle routes in the vicinity of the Specific Plan area. Bicycle lanes are present along 120th Street from Compton Avenue to Wilmington Boulevard and a bicycle route is designated from Wilmington Boulevard to Mona Boulevard along 120th/119th Street.

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)?*

Less than Significant Impact: As part of the County's guidelines, projects may potentially be screened out from CEQA analysis within this criteria based on certain features such as location, land use type, density, etc. The applicable screening criteria evaluated for the proposed project is "Proximity to Transit Based Screening Criteria" (Section 3.1.2.3). Given that the project is located within a one-half mile radius of a major transit stop, the following questions are to be considered as part of this criteria:

- Does the project have a Floor Area Ratio (FAR) less than 0.75?
- Does the project provide more parking than required by the County Code?
- Is the project inconsistent with the SCAG RTP/SCS?
- Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units?

The answers to the four criteria questions are as follows:

- *Does the project have a Floor Area Ratio less than 0.75?* **No**, the proposed project would have an FAR of 2.15.
- *Does the project provide more parking than required by the County Code?* **No**, a total of 73 parking spaces would be allocated to the proposed project from the existing surface parking lot at the northeast corner of Compton Avenue and from the parking facility on 118th Street. The Willowbrook TOD Specific Plan and TOD Parking Reduction Overlay Zone set the parking requirements contained in Chapter 22.112 of the County of Los Angeles Code of Ordinances as the maximum parking standards for non-residential uses. The minimum parking standard for non-residential uses in the Willowbrook TOD Specific Plan and TOD Parking Reduction Overlay Zone is 40 percent of the maximum requirement. The maximum parking requirement for the proposed project, as required by Chapter 22.112 of the County of Los Angeles Code of Ordinances, is 181 spaces. At 40 percent of the maximum parking requirement, the minimum parking requirement for the proposed project would be 73 parking spaces.
- *Is the project inconsistent with the SCAG RTP/SCS?* **No**, the proposed project is consistent with the growth projections that were used for the SCAG RTP/SCS.
- *Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units?* **No**, no residential units are located on the project site and the proposed project would not remove any residential units.

As described, the answer to all four of the criteria questions is No. Therefore, based on the screening criteria, further analysis is not required and the project's impacts are considered to be less than significant.

Furthermore, CEQA Guideline Section 15064.3, subdivision (b)(1), states lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a

high-quality transit corridor will have a less-than-significant impact on VMT. A major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a 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 (CA Public Resource Code Section 21064.3).

The Project site is approximately 0.42 miles from the major transit stop of the Willowbrook-Rosa Parks Station which is served by Metro A (Blue) and C (Green) light rail lines and is also directly served by several bus lines via off-street bus loading bays. As such, the project is located within a Transit Priority Area (TPA) as defined by the Southern California Association of Government (SCAG), as part of SCAG's 2045 Regional Transportation Plan/Sustainable Communities Strategy, updated as of June 2019.

Since the project is within ½ mile of an existing major transit stop along an existing high quality transit corridor (in a transit priority area) and is a part of a mixed-use transit-oriented district specific plan, the project is presumed to cause a less than significant transportation impact. Thus, the project would not 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)?*

Less than Significant Impact: Parking for the project would be provided as a part of the overall campus parking. The existing surface parking lot at the northeast corner of the Compton Avenue/118th Street intersection would allocate 65 parking spaces to the proposed project. In addition, the parking facility on 118th Street (between the former Abraham Lincoln Elementary School and the Park Water Company Well 19C property) would be expanded. This expansion will include structured parking over an existing surface parking lot, with connections to an existing three level parking structure. While the new building will be located along 120th Street, it is anticipated that students and employees accessing the site would utilize the current and future CDU parking facilities along 118th Street.

Driveway access will be designed to ensure no hazardous design features related to vehicle and pedestrian mobility (sharp curves, line of sight obstructions) are included. 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 With Mitigation Incorporated: The project site is immediately adjacent to the west of Los Angeles County Fire Department Station 41 and the access to the hospital emergency department along 120th Street. Previous construction efforts closed the north lane of 120th Street and utilized the two-way left turn lane as a travel lane.

Mitigation Measure: Prior to construction, a construction traffic management plan shall be implemented to address construction-related traffic and emergency access issues. Flag persons and/or detours shall be

provided as needed, and construction signs shall be posted to advise motorists of reduced construction zone speed limits. The construction traffic management plan shall be developed in coordination with the Martin Luther King, Jr. medical facility and LACFD to ensure that emergency vehicle access along 118th and 120th Streets are maintained and that access to LSCFD Station 41 and the Martin Luther King, Jr. Medical Campus is not restricted. Thus, construction and operation of the proposed project would not result in inadequate emergency access assuming this mitigation measure.

4.0 NON-CEQA ANALYSIS

This section presents the non-CEQA analysis of the projects impacts on circulation, per the County's Site Access Studies guidelines. Given the results of the CEQA analysis, this non-CEQA traffic operational analysis is not required per County screening criteria guidelines. Thus, this analysis is being provided for informational purposes only.

4.1 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 1** 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 1: Intersection Level of Service Definitions – HCM Methodology

Level of Service	Description	Signalized 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
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
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
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
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>55 and ≤ 80
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

Source: Highway Capacity Manual 2000, Transportation Research Board, Washington, D.C., 2000.

4.2 Existing Conditions

This section presents the existing traffic operations in the study area. The proposed study area for site access analysis includes the following four (4) significant signalized intersections in the vicinity of the project site:

1. Compton Avenue/118th Street;
2. Compton Avenue/120th Street;
3. Wilmington Avenue/118th Street; and
4. Wilmington Avenue/120th Street-119th Street.

The study intersections for analysis were selected based on the expected distribution of project-generated trips, to and from the parking access along 118th Street, which typically utilize higher capacity roadways. The project site location and proposed study intersections are shown in **Figure 2**.

Traffic operations were evaluated for each of the following scenarios during the weekday a.m. (7:00 – 9:00) and p.m. (4:00 – 6:00) peak hours:

- Existing Conditions;
- Existing Plus Project Conditions;
- Opening Year 2023 Without Project Conditions; and
- Opening Year 2023 With Project Conditions.

Based on construction information provided by the project team, the projected opening year for the proposed project is 2025.

4.2.1 Existing Traffic Volumes

Due to the uncertainty of current traffic conditions related to the Covid-19 pandemic, new traffic data was not collected at the study intersections. In addition, current construction activities along 120th Street adjacent to the project site could result in atypical traffic patterns. Thus, as an alternative to collecting new data, Iteris utilized existing traffic volumes (a.m. and p.m. peak hour) from the *Willowbrook TOD Specific Plan EIR Traffic Study* (May 2017), where available.

Detailed vehicle turning movement data are included in **Appendix A**. The 2015 historical counts were then increased by an annual growth rate of 1% in order to develop a 2020-equivalent volume set for use in this analysis. **Figure 3** shows the existing peak hour volumes at the study intersections.

4.2.2 Existing Intersection Levels of Service

A level of service analysis was conducted to evaluate existing intersection operations during the a.m. and p.m. peak hours at the study intersections. **Figure 4** shows the existing intersection lane configurations. **Table 2** summarizes the existing LOS at the study intersections. LOS calculation sheets are provided in **Appendix B**.

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Figure 2
Project Locations and Study Intersections

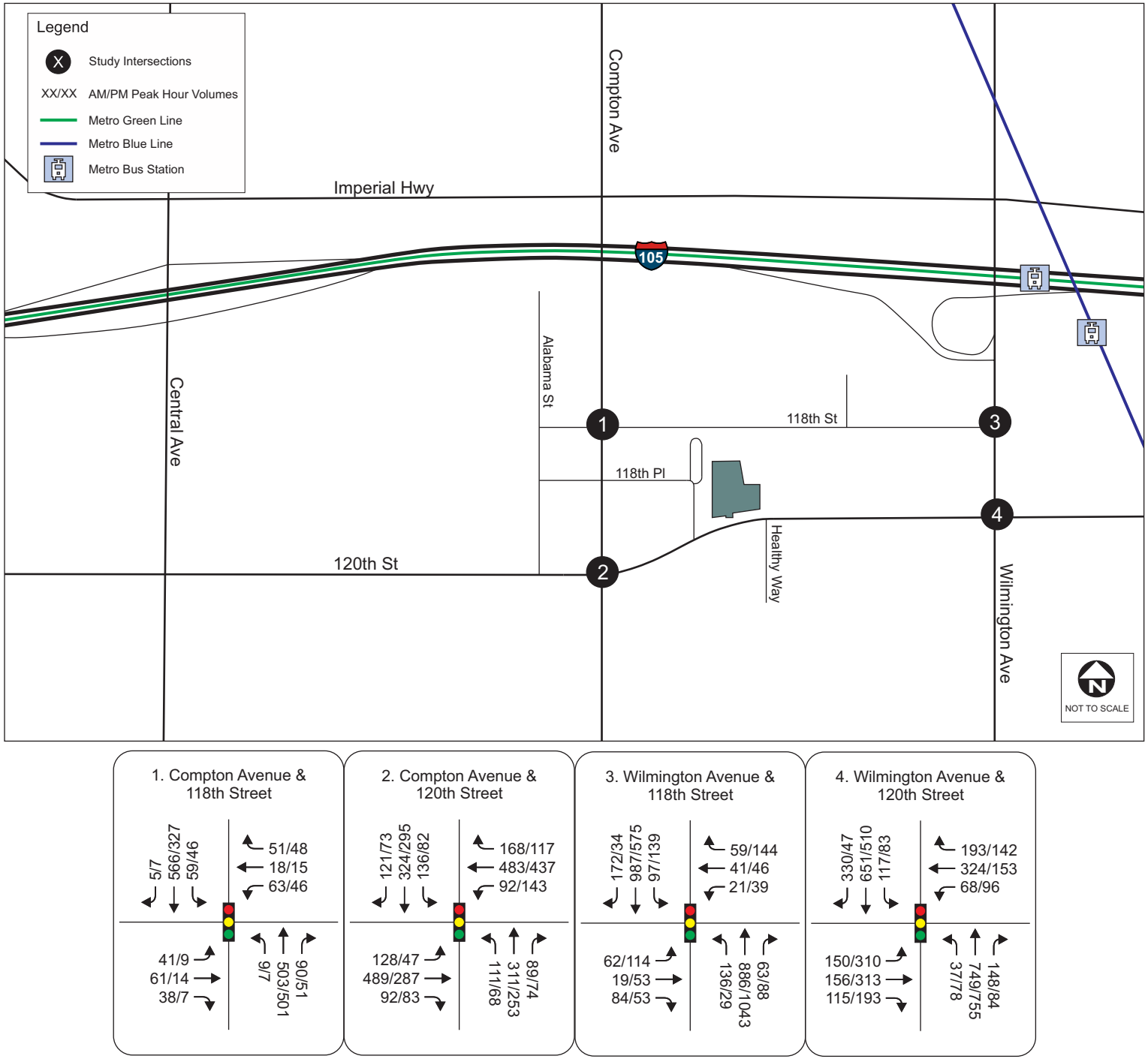

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Figure 3
Existing Traffic Volumes

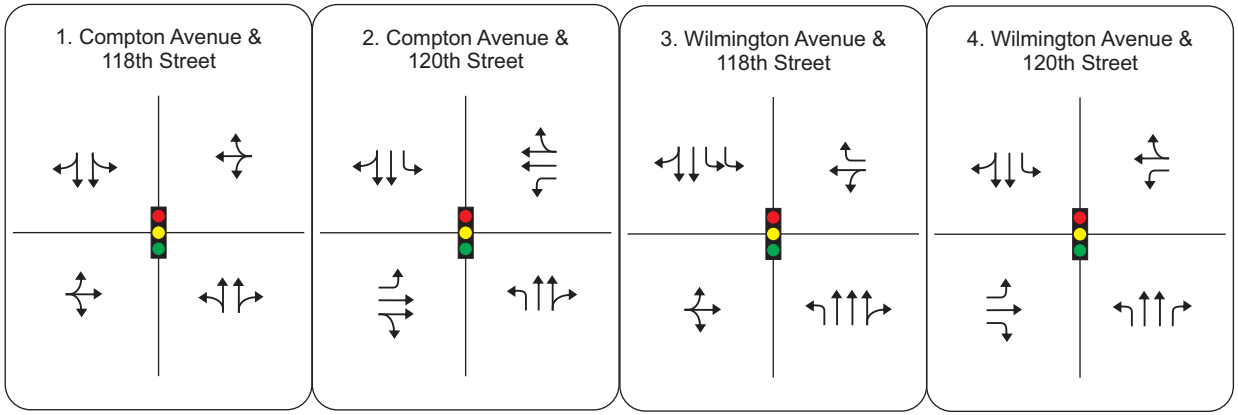

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Figure 4
Existing Lane Configurations

Table 2: Existing Intersection Peak Hour Levels of Service

Intersection		Control Type	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
1	Compton Ave/118th St	signalized	9.4	A	6.3	A
2	Compton Ave/120th St	signalized	19.8	B	15.7	B
3	Wilmington Ave/118th St	signalized	16.8	B	17.3	B
4	Wilmington Ave/120th St-119th St	signalized	26.1	C	22.0	C

Notes:
sec = seconds; LOS = Level of Service.

As shown in **Table 2**, the study intersections are currently operating at LOS C or better.

4.3 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. As part of the new HPEB building, an additional enrollment of 240 students is anticipated. 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. The ITE land use category for the proposed project is identified as University/College (Code 550), using the number of students as the metric. The Junior/Community College (Code 540) category was reviewed as well for potential use in the analysis. However, trip rates for this category are based on fewer sample studies than the University/College trip rates.

4.3.1 Project Trip Generation

The number of trips forecast to be generated by the proposed project was calculated by multiplying the trip generation rate by the proposed number of new student enrollment. The net trip calculations assume trip discounts accounting for the project's proximity to a major transit station (Metro the A Line and C Line) resulting in non-vehicular trips (i.e., walking and bicycling trips) in lieu of vehicular trips. The result of this calculation is shown in **Table 3**.

Table 3: 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	
University/College (550)	240	Students	78%	22%	0.15	32%	68%	0.15	1.56	28	8	36	12	24	36	374
Transit Oriented Development (TOD) Reduction (20%)										-6	-2	-8	-2	-5	-7	-75
NET PROJECT TOTAL										**22**	**6**	**28**	**10**	**19**	**29**	**299**

As shown, the proposed project's increase in student enrollment is forecast to generate 28 net new a.m. peak hour trips, 29 net new p.m. peak hour trips, and 299 net new daily trips.

4.3.2 Project Trip Distribution and Assignment

Trip distribution assumptions are used to determine the origin and destination of new vehicle trips associated with the project. Trip distribution is based on information provided by CDU, regarding where current students live. While the new building will be located along 120th Street, it is anticipated that students and employees accessing the site would utilize the current and future CDU parking facilities along 118th Street. The project trip distribution is shown in **Figure 5**. 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 6** illustrates the proposed project trip assignment onto the roadway network during the a.m. and p.m. peak hours.

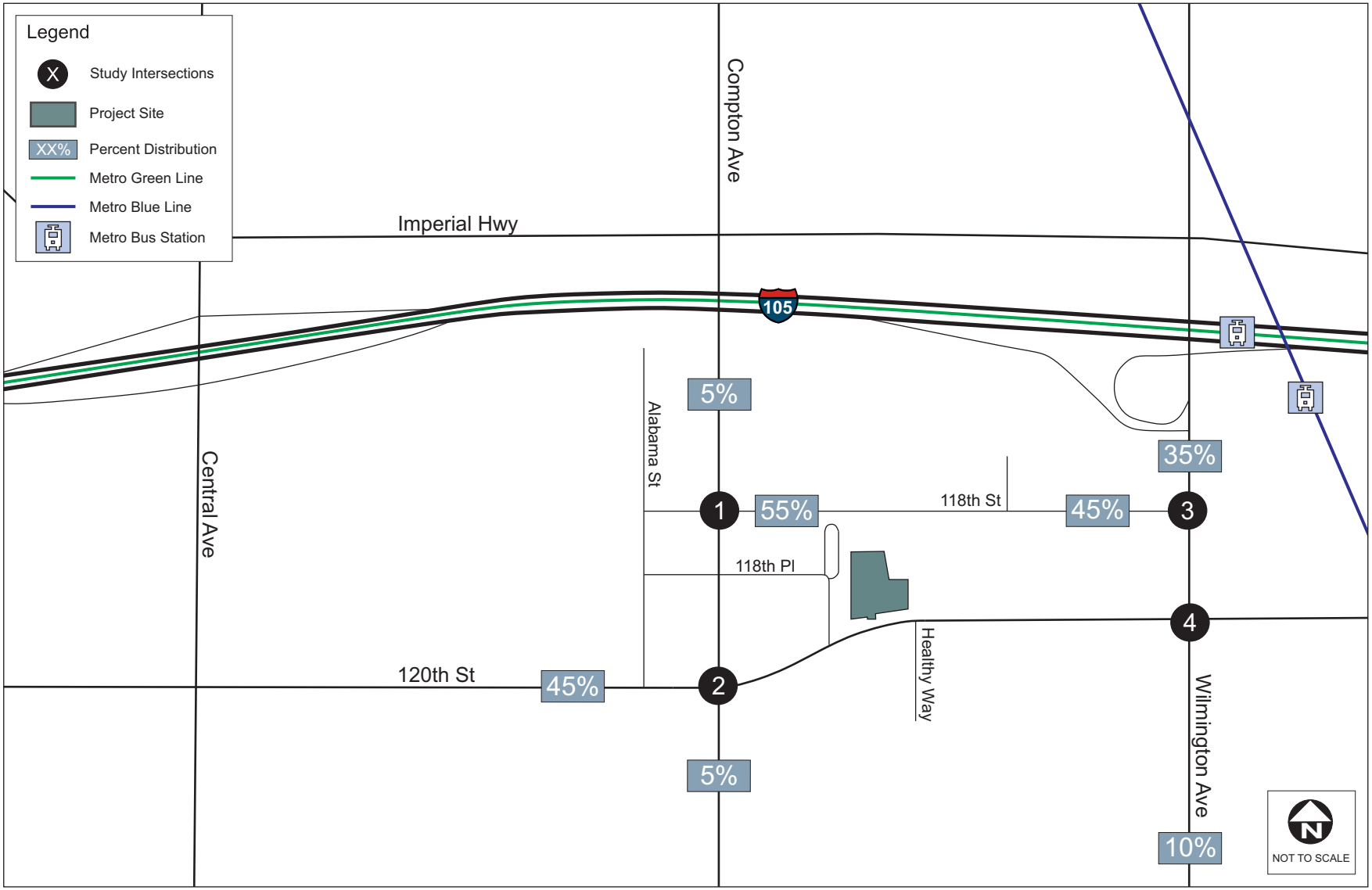

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Figure 5
Trip Distribution

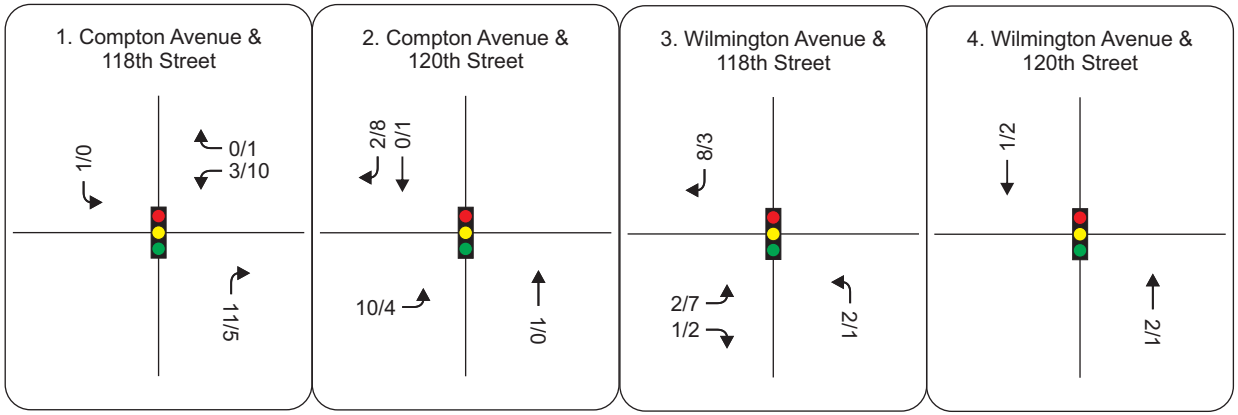

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Figure 6
Trip Assignment

4.4 Existing Plus Project Conditions

Existing plus project conditions were developed by adding trips generated by the proposed project to existing volumes. **Figure 7** illustrates the existing plus project traffic volumes at the study intersections. **Table 4** summarizes the existing plus project level of service at the study intersections. Level of service calculation worksheets are included in **Appendix B**.

Table 4: Existing Plus Project Intersection Peak Hour Levels of Service

Intersection		Existing Conditions				Existing Plus 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	Compton Ave/118th St	9.4	A	6.3	A	9.4	A	7.1	A	0.0	0.8
2	Compton Ave/120th St	19.8	B	15.7	B	19.6	B	16.3	B	0.2	0.6
	Wilmington Ave/118th St	16.8	B	17.3	B	16.4	B	16.2	B	0.4	0.9
	Wilmington Ave/120th St-119th St	26.1	C	22.0	C	26.1	C	22.1	C	0.0	0.1

Notes:
s = seconds, LOS = Level of Service.

As shown in **Table 4**, project-related increases in peak hour intersection delay are minimal. These increases in peak hour traffic are not forecast to result in worsening of intersection LOS at the significant intersections in the vicinity of the project.

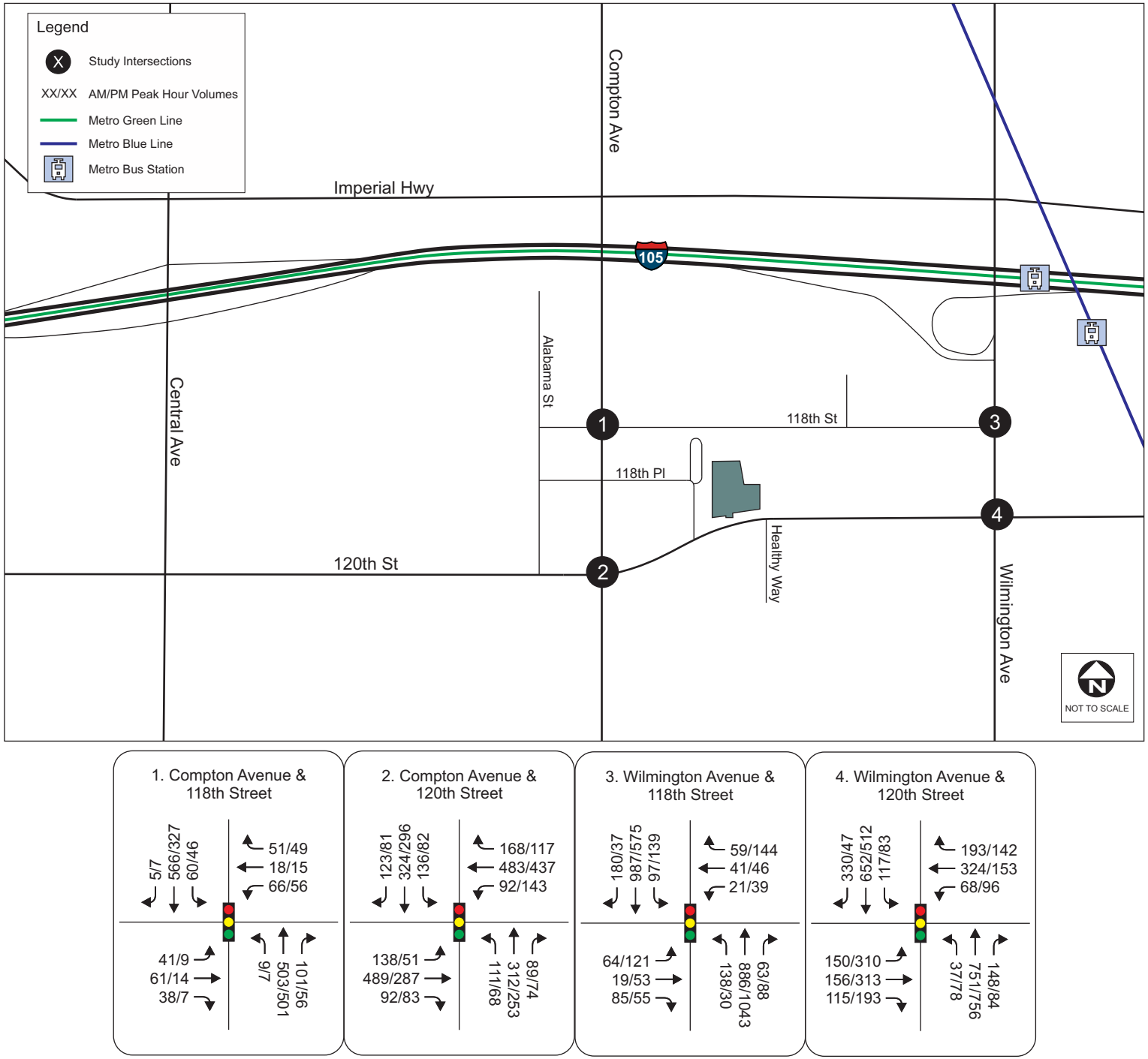

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Figure 7
Existing Plus Project Traffic Volumes

4.5 Opening Year 2023 Without Project Conditions

The project opening year is 2023. Therefore, this section analyzes opening year 2023 traffic conditions without the proposed project. Opening year 2023 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 traffic volumes by 0.5% per year.

A level of service analysis was conducted to evaluate opening year 2023 without project intersection operations during the weekday a.m. and p.m. peak hours. Opening year 2023 without project peak hour volumes at the study intersections are provided in **Appendix C**. **Table 5** summarizes the opening year 2023 without project levels of service at the study intersections. Level of service calculation worksheets are included in **Appendix B**.

Table 5: Opening Year 2023 Without Project Intersection Peak Hour Levels of Service

Intersection		Control Type	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
1	Compton Ave/118th St	signalized	9.5	A	6.8	A
2	Compton Ave/120th St	signalized	19.7	B	16.4	B
3	Wilmington Ave/118th St	signalized	16.4	B	16.1	B
4	Wilmington Ave/120th St-119th St	signalized	26.4	C	22.6	C

Notes:
s = seconds, LOS = Level of Service.

As shown in **Table 5**, the study intersections are forecast to operate at LOS C or better in opening year 2023.

4.6 Opening Year 2023 With Project Conditions

Opening year 2023 with project conditions were developed by adding trips generated by the proposed project to opening year 2023 without project volumes. Opening year 2023 with project traffic volumes at the study intersections are provided in **Appendix C**.

A level of service analysis was conducted to evaluate year 2023 with project intersection operations during the a.m. and p.m. peak hours. **Table 6** summarizes the opening year 2023 with project levels of service at the study intersections. Level of service calculation worksheets are included in **Appendix B**.

Table 6: Opening Year 2023 With Project Intersection Peak Hour Level of Service

Intersection		Existing Conditions				Existing Plus 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	Compton Ave/118th St	9.5	A	6.8	A	9.5	A	7.2	A	0.0	0.4
2	Compton Ave/120th St	19.7	B	16.4	B	19.8	B	16.4	B	0.1	0.0
	Wilmington Ave/118th St	16.4	B	16.1	B	16.5	B	16.5	B	0.1	0.4
	Wilmington Ave/120th St-119th St	26.4	C	22.6	C	26.4	C	22.6	C	0.0	0.0

Notes:
s = seconds, LOS = Level of Service.

As shown in **Table 6**, project-related increases in peak hour intersection delay are minimal. These increases in traffic are not forecast to result in worsening of intersection LOS at the significant intersections in the vicinity of the project in the opening year.

4.7 Construction Phase & Local Residential Street Cut-Through Analyses

This section provides a qualitative assessment of construction activities and the potential for residential street cut-through as a result of the project.

The project construction activities are evaluated to determine any potential negative effects on pedestrian, bicycle, transit, or vehicle circulation. This assessment considers whether any temporary lane closures, loss of on-street parking, or removal of bus stops would occur during construction activities. Based on information provided by the project applicant, it is not anticipated that construction activities would require closure of any travel lanes. However, there is the potential for a temporary closure of the curb/parking lane along 120th Street.

Vehicle cut-through trips are defined as those which feature travel along local streets as an alternative to

a higher classification street segment. The parking access is provided along 118th Street, which is a current access point for CDU students and employees. Thus, the project would not add a new access point to the network. New project trips would distribute through the circulation network similar to current CDU trips. Therefore, it is not anticipated that the project would result in any new vehicle cut-through trips to a local street as an alternative to utilizing the higher capacities roadways such as Wilmington Avenue, Compton Avenue, and 120th Street.

5.0 CONCLUSIONS

The proposed HPEB project site is a 46,650 square foot parcel comprising one lot located at the southwest corner of the CDU campus. The proposed new building will be located along 120th Street, west of Compton Avenue, between a newly constructed CDU APLA Wellness Center to the east and the existing King/Drew Magnet High School of Medicine and Science to the west.

The results of the analysis are as follows:

- CEQA Analysis
  - Based on the County's screening criteria (Proximity to Transit Based Screening Criteria), further analysis is not required and the project's impacts are considered to be less than significant.
- Non-CEQA Analysis
  - The significant intersections in the vicinity of the project are currently operating at LOS C or better.
  - The proposed project's increase in student enrollment is forecast to generate 28 net new a.m. peak hour trips, 29 net new p.m. peak hour trips, and 299 net new daily trips.
  - The project-related increases in peak hour traffic are not forecast to result in deficient operations at the significant intersections in the vicinity of the project.

Charles R. Drew University
Health Professions Education Building
Transportation Impact Analysis
Technical Appendix

Submitted to:

11239 | Prepared by **Iteris, Inc.**

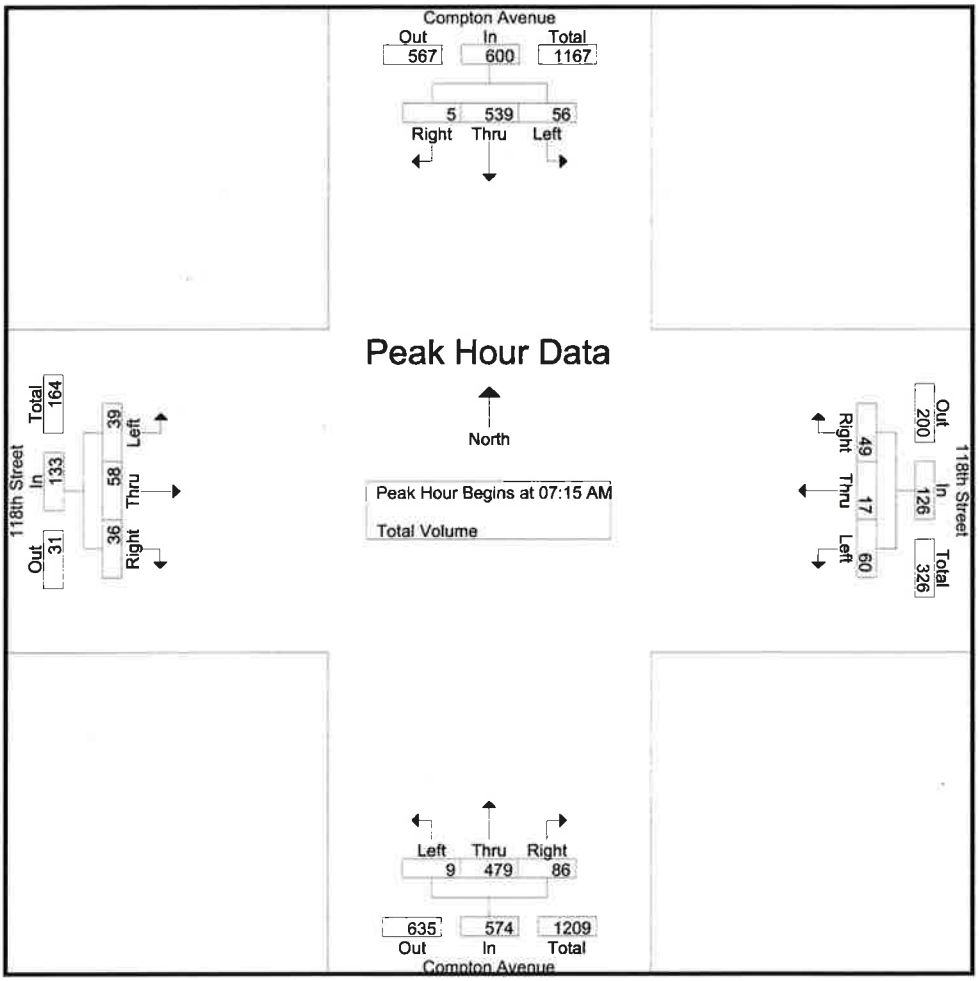
Innovating Through Informatics™

APPENDIX A – EXISTING TRAFFIC COUNTS

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

County of Los Angeles
N/S: Compton Avenue
E/W: 118th Street
Weather: Clear

File Name : CLACO118AM
Site Code : 12815514
Start Date : 9/23/2015
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	8	119	1	128	**22**	3	10	35	**4**	113	9	126	2	6	**12**	20
+15 mins.	9	146	0	155	18	**8**	**16**	**42**	3	123	25	151	12	14	9	35
+30 mins.	**20**	**158**	**3**	**181**	15	5	15	35	0	**135**	**32**	**167**	**17**	**21**	12	**50**
+45 mins.	19	116	1	136	15	4	9	28	2	108	20	130	8	17	3	28
Total Volume	56	539	5	600	70	20	50	140	9	479	86	574	39	58	36	133
% App. Total	9.3	89.8	0.8		50	14.3	35.7		1.6	83.4	15		29.3	43.6	27.1	
PHF	.700	.853	.417	.829	.795	.625	.781	.833	.563	.887	.672	.859	.574	.690	.750	.665

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County of Los Angeles
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E/W: 118th Street
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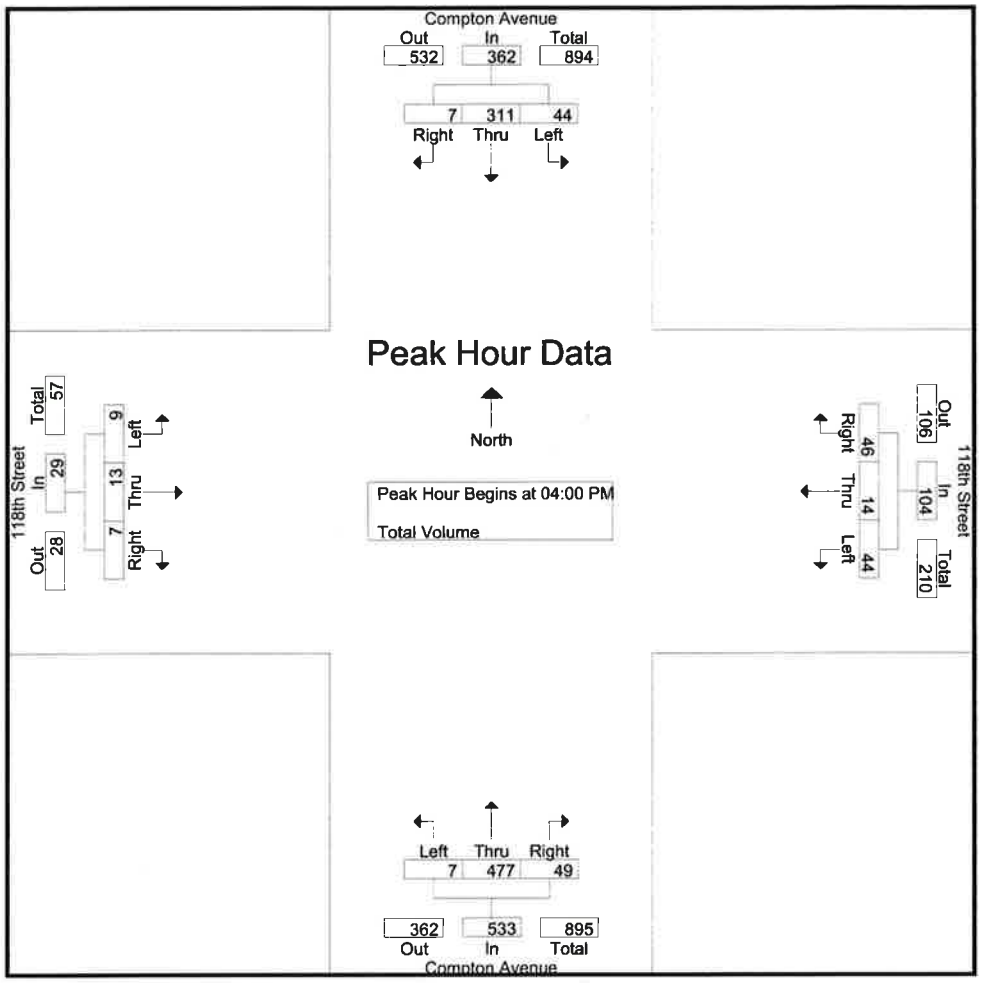
Site Code : 12815514
Start Date : 9/23/2015
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:30 PM			
+0 mins.	13	79	**4**	**96**	12	3	16	31	**4**	104	14	122	2	5	2	9
+15 mins.	**16**	79	1	96	**13**	**7**	**18**	**38**	0	127	**17**	144	1	4	1	6
+30 mins.	10	73	1	84	6	3	8	17	2	**133**	12	**147**	0	4	2	6
+45 mins.	5	**80**	1	86	12	4	11	27	1	113	6	120	**3**	**7**	**3**	**13**
Total Volume	44	311	7	362	43	17	53	113	7	477	49	533	6	20	8	34
% App. Total	12.2	85.9	1.9		38.1	15	46.9		1.3	89.5	9.2		17.6	58.8	23.5	
PHF	.688	.972	.438	.943	.827	.607	.736	.743	.438	.897	.721	.906	.500	.714	.667	.654

Counts Unlimited
PO Box 1178
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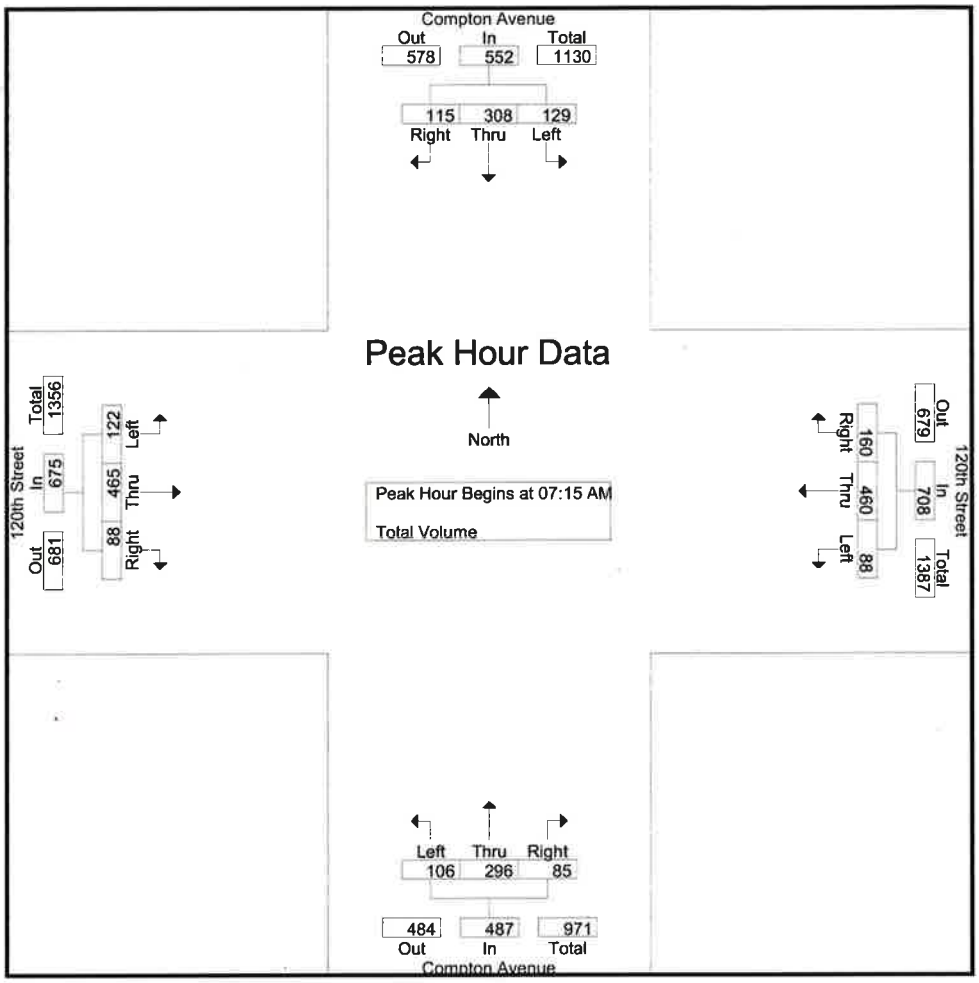
County of Los Angeles
N/S: Compton Avenue
E/W: 120th Street
Weather: Clear

File Name : CLACO120AM
Site Code : 12815514
Start Date : 9/23/2015
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	17	84	24	125	12	86	32	130	20	76	18	114	27	73	14	114
+15 mins.	30	**89**	20	139	**32**	129	41	202	29	**78**	22	129	**34**	106	25	165
+30 mins.	**47**	69	**44**	**160**	30	**158**	**47**	**235**	**33**	76	21	**130**	34	**164**	**28**	**226**
+45 mins.	35	66	27	128	14	87	40	141	24	66	**24**	114	27	122	21	170
Total Volume	129	308	115	552	88	460	160	708	106	296	85	487	122	465	88	675
% App. Total	23.4	55.8	20.8		12.4	65	22.6		21.8	60.8	17.5		18.1	68.9	13	
PHF	.686	.865	.653	.863	.688	.728	.851	.753	.803	.949	.885	.937	.897	.709	.786	.747

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County of Los Angeles
N/S: Compton Avenue
E/W: 120th Street
Weather: Clear

File Name : CLACO120PM
Site Code : 12815514
Start Date : 9/23/2015
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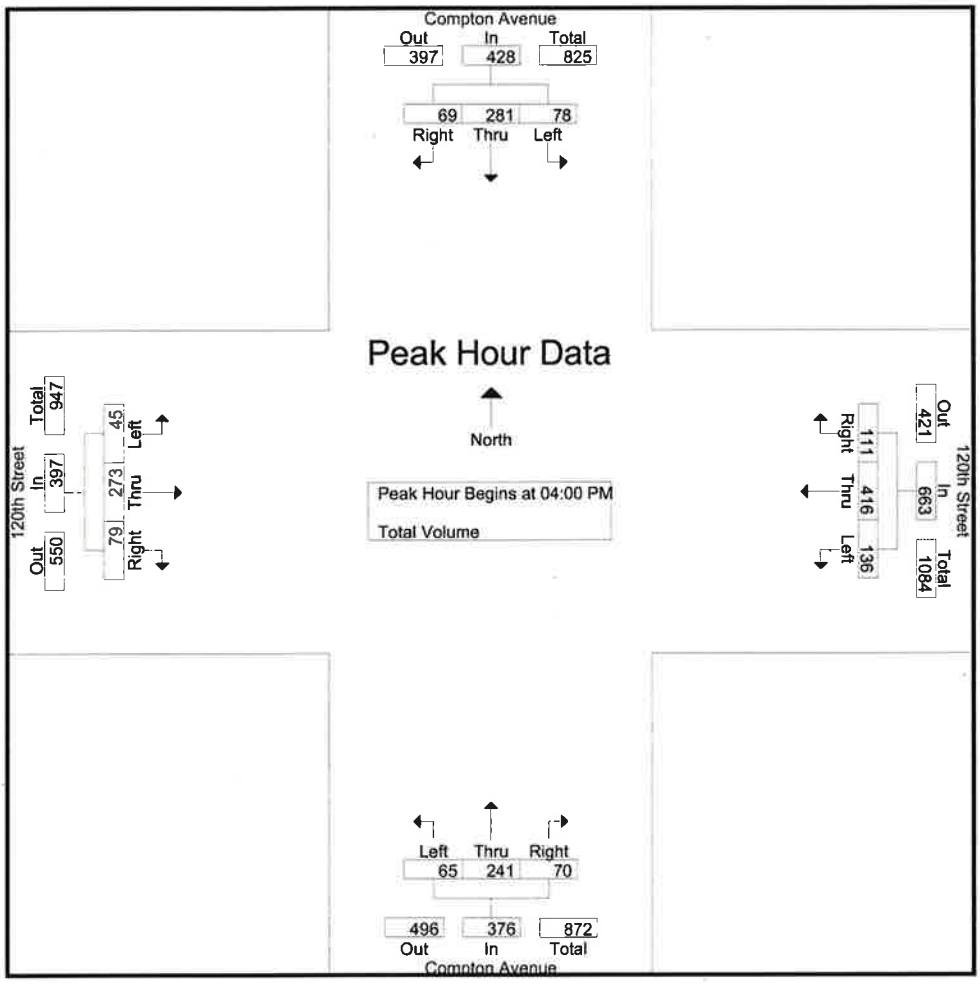

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:15 PM				04:30 PM			
+0 mins.	**24**	66	13	103	25	97	**27**	149	11	**77**	13	**101**	**15**	**89**	**26**	**130**
+15 mins.	18	**91**	15	**124**	**41**	103	27	171	19	48	**23**	90	12	79	20	111
+30 mins.	16	65	19	100	31	119	24	174	**24**	59	17	100	6	70	14	90
+45 mins.	20	59	**22**	101	38	**133**	19	**190**	9	60	17	86	5	51	20	76
Total Volume	78	281	69	428	135	452	97	684	63	244	70	377	38	289	80	407
% App. Total	18.2	65.7	16.1		19.7	66.1	14.2		16.7	64.7	18.6		9.3	71	19.7	
PHF	.813	.772	.784	.863	.823	.850	.898	.900	.656	.792	.761	.933	.633	.812	.769	.783

Counts Unlimited
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County of Los Angeles
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E/W: 118th Street
Weather: Clear

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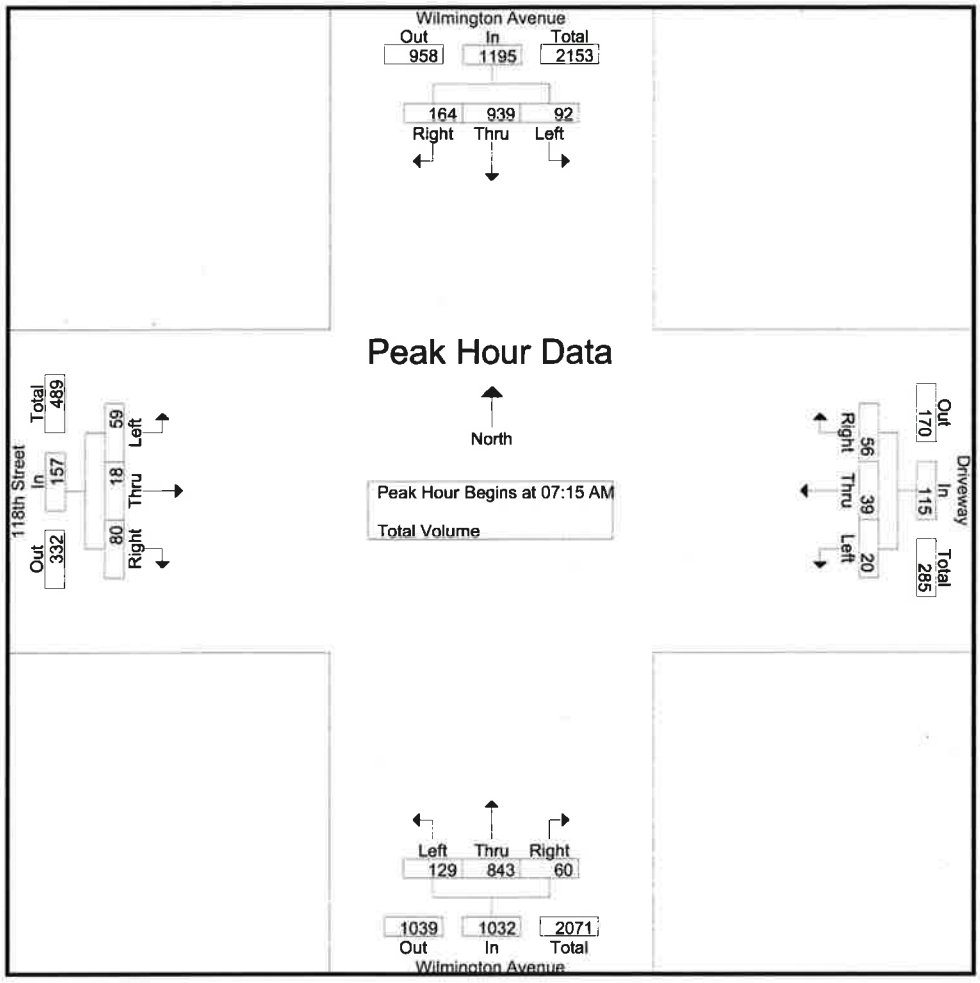
Site Code : 12815514
Start Date : 9/23/2015
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:00 AM				07:30 AM			
+0 mins.	23	208	31	262	3	**13**	14	30	5	221	6	232	14	3	20	37
+15 mins.	20	**252**	38	310	**7**	7	**26**	**40**	17	225	9	251	**23**	7	19	**49**
+30 mins.	**26**	245	**50**	**321**	7	6	24	37	36	**250**	**17**	**303**	12	6	**31**	49
+45 mins.	23	234	45	302	5	7	18	30	**42**	203	17	262	9	**9**	17	35
Total Volume	92	939	164	1195	22	33	82	137	100	899	49	1048	58	25	87	170
% App. Total	7.7	78.6	13.7		16.1	24.1	59.9		9.5	85.8	4.7		34.1	14.7	51.2	
PHF	.885	.932	.820	.931	.786	.635	.788	.856	.595	.899	.721	.865	.630	.694	.702	.867

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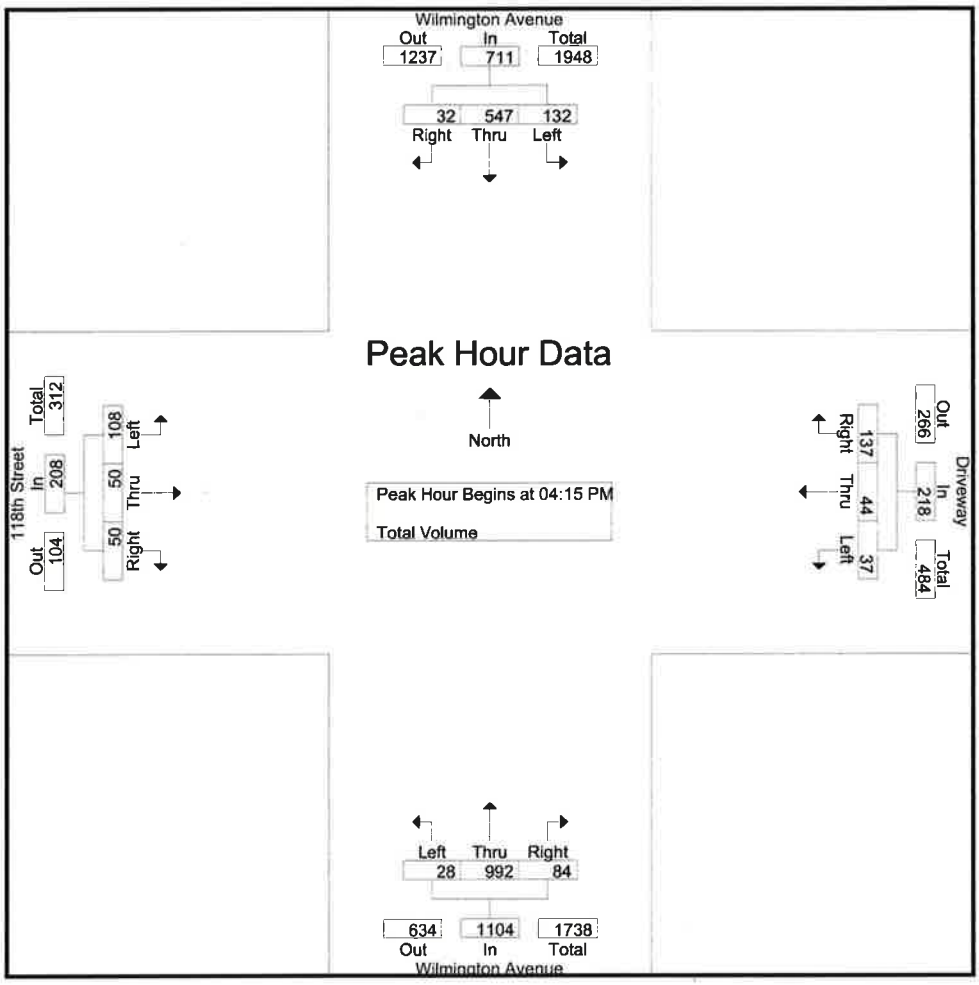

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				05:00 PM				04:30 PM				04:15 PM			
+0 mins.	24	135	9	168	7	8	44	59	**10**	**274**	**25**	**309**	20	**19**	**17**	56
+15 mins.	**39**	**150**	**11**	**200**	12	9	32	53	5	247	18	270	**33**	16	14	**63**
+30 mins.	32	137	8	177	**16**	**12**	34	62	4	254	25	283	28	5	8	41
+45 mins.	37	125	4	166	9	9	**45**	**63**	5	241	17	263	27	10	11	48
Total Volume	132	547	32	711	44	38	155	237	24	1016	85	1125	108	50	50	208
% App. Total	18.6	76.9	4.5		18.6	16	65.4		2.1	90.3	7.6		51.9	24	24	
PHF	.846	.912	.727	.889	.688	.792	.861	.940	.600	.927	.850	.910	.818	.658	.735	.825

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County of Los Angeles
N/S: Wilmington Avenue
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Weather: Clear

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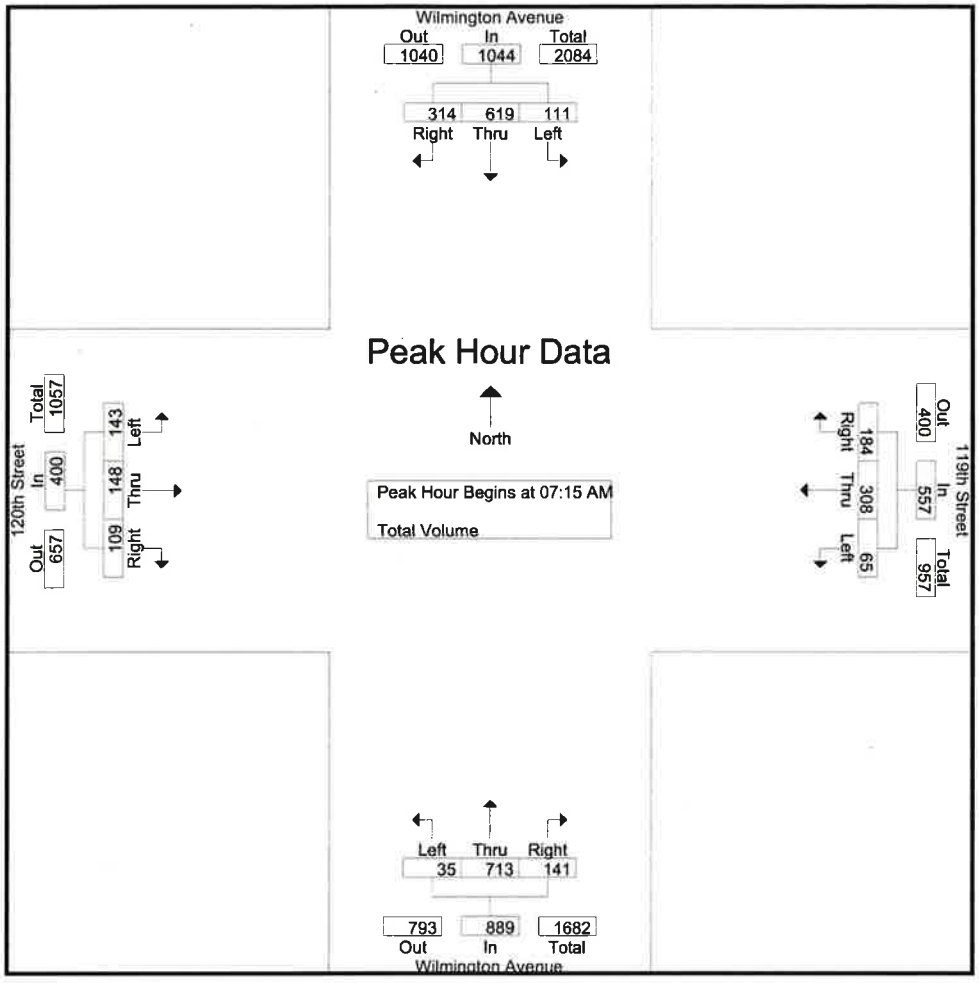
Site Code : 12815514
Start Date : 9/23/2015
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	20	140	63	223	8	76	34	118	5	184	22	211	31	23	20	74
+15 mins.	25	166	90	**281**	**22**	85	46	153	7	184	30	221	**42**	36	24	102
+30 mins.	27	144	**95**	266	14	**92**	**53**	**159**	6	**218**	41	**265**	32	**48**	**38**	**118**
+45 mins.	**39**	**169**	66	274	21	55	51	127	**11**	174	**46**	231	38	41	27	106
Total Volume	111	619	314	1044	65	308	184	557	29	760	139	928	143	148	109	400
% App. Total	10.6	59.3	30.1		11.7	55.3	33		3.1	81.9	15		35.8	37	27.2	
PHF	.712	.916	.826	.929	.739	.837	.868	.876	.659	.872	.755	.875	.851	.771	.717	.847

Counts Unlimited
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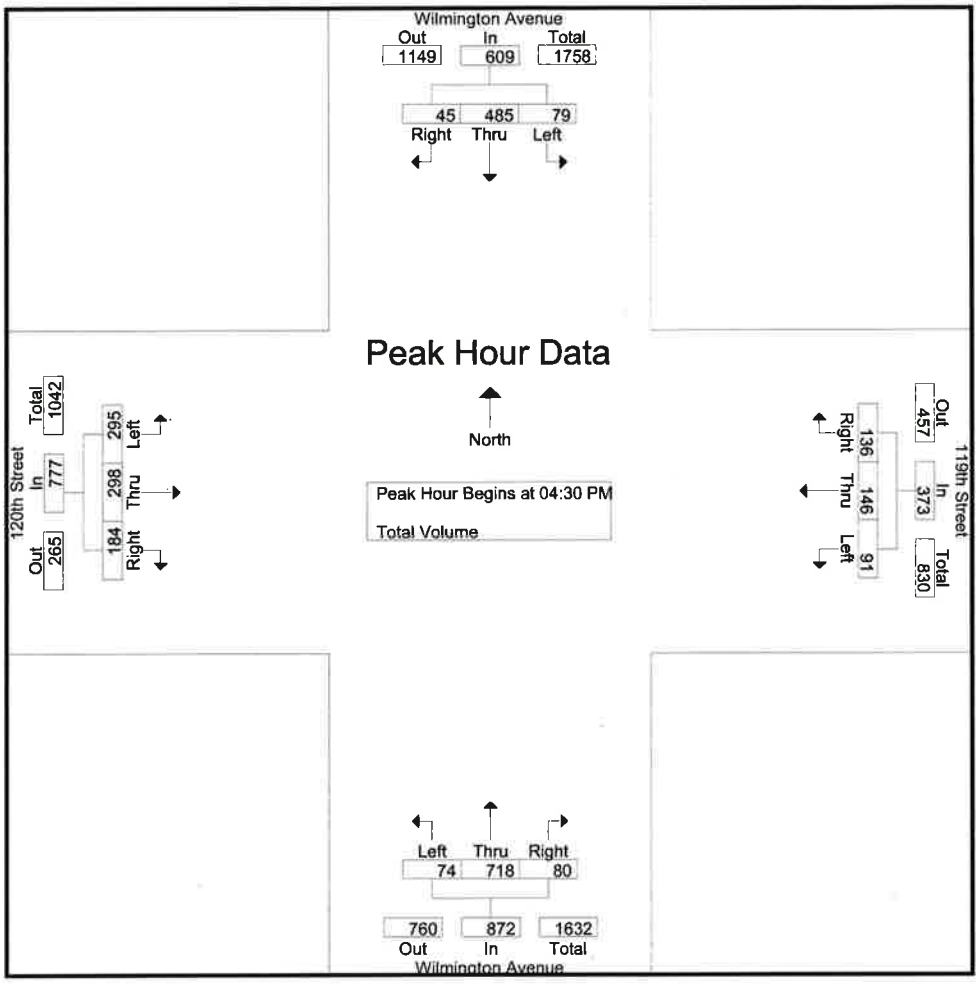
County of Los Angeles
N/S: Wilmington Avenue
E/W: 119th Street
Weather: Clear

File Name : CLAWI119PM
Site Code : 12815514
Start Date : 9/23/2015
Page No : 2

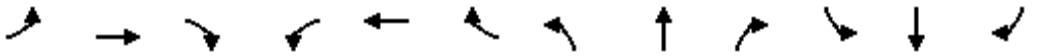


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:30 PM				05:00 PM				04:30 PM			
+0 mins.	18	132	12	162	13	36	**43**	92	16	172	21	209	78	86	**64**	**228**
+15 mins.	**23**	**139**	14	**176**	26	**44**	30	**100**	**18**	181	15	214	75	**95**	45	215
+30 mins.	15	127	**15**	157	**28**	30	30	88	17	**208**	20	**245**	**79**	48	38	165
+45 mins.	20	115	7	142	24	36	33	93	18	169	**22**	209	63	69	37	169
Total Volume	76	513	48	637	91	146	136	373	69	730	78	877	295	298	184	777
% App. Total	11.9	80.5	7.5		24.4	39.1	36.5		7.9	83.2	8.9		38	38.4	23.7	
PHF	.826	.923	.800	.905	.813	.830	.791	.933	.958	.877	.886	.895	.934	.784	.719	.852

APPENDIX B – LOS CALCULATION SHEETS

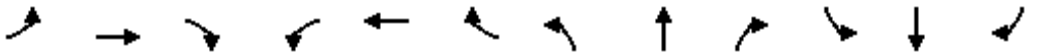
Existing LOS Calculation Sheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	61	38	63	18	51	9	503	90	59	566	5
Future Volume (veh/h)	41	61	38	63	18	51	9	503	90	59	566	5
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	53	78	49	81	23	65	12	645	115	76	726	6
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	122	66	155	43	83	60	2203	388	239	2183	18
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	379	836	455	607	298	566	18	2919	514	246	2892	24
Grp Volume(v), veh/h	180	0	0	169	0	0	412	0	360	377	0	431
Grp Sat Flow(s),veh/h/ln	1670	0	0	1471	0	0	1841	0	1610	1464	0	1698
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	5.7	0.0	0.0	6.7
Cycle Q Clear(g_c), s	8.2	0.0	0.0	8.9	0.0	0.0	5.6	0.0	5.7	5.0	0.0	6.7
Prop In Lane	0.29		0.27	0.48		0.38	0.03		0.32	0.20		0.01
Lane Grp Cap(c), veh/h	302	0	0	281	0	0	1436	0	1215	1159	0	1282
V/C Ratio(X)	0.60	0.00	0.00	0.60	0.00	0.00	0.29	0.00	0.30	0.33	0.00	0.34
Avail Cap(c_a), veh/h	680	0	0	623	0	0	1436	0	1215	1159	0	1282
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	0.0	33.1	0.0	0.0	3.1	0.0	3.1	3.0	0.0	3.3
Incr Delay (d2), s/veh	1.9	0.0	0.0	2.1	0.0	0.0	0.5	0.0	0.6	0.7	0.0	0.7
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	3.4	0.0	0.0	3.3	0.0	0.0	1.6	0.0	1.4	1.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	0.0	0.0	35.2	0.0	0.0	3.6	0.0	3.7	3.8	0.0	4.0
LnGrp LOS	C	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		180			169			772			808	
Approach Delay, s/veh		34.8			35.2			3.7			3.9	
Approach LOS		C			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		15.8		65.0		15.8				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		61.0		31.0		61.0		31.0				
Max Q Clear Time (g_c+I1), s		7.7		10.2		8.7		10.9				
Green Ext Time (p_c), s		6.0		1.0		6.8		0.9				

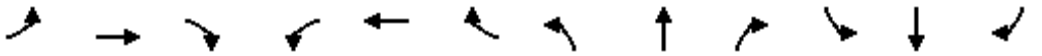
Intersection Summary												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	489	92	92	483	168	111	311	89	136	324	121
Future Volume (veh/h)	128	489	92	92	483	168	111	311	89	136	324	121
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	156	596	112	112	589	205	135	379	109	166	395	148
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	876	743	243	1212	421	372	1210	344	399	1124	416
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	684	1870	1585	741	2587	899	863	2731	776	908	2539	939
Grp Volume(v), veh/h	156	596	112	112	404	390	135	245	243	166	275	268
Grp Sat Flow(s),veh/h/ln	684	1870	1585	741	1777	1709	863	1777	1731	908	1777	1701
Q Serve(g_s), s	18.4	22.4	3.6	12.6	14.1	14.2	11.1	8.0	8.2	13.1	9.2	9.4
Cycle Q Clear(g_c), s	32.6	22.4	3.6	35.0	14.1	14.2	20.5	8.0	8.2	21.3	9.2	9.4
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.45	1.00		0.55
Lane Grp Cap(c), veh/h	293	876	743	243	833	801	372	787	766	399	787	753
V/C Ratio(X)	0.53	0.68	0.15	0.46	0.49	0.49	0.36	0.31	0.32	0.42	0.35	0.36
Avail Cap(c_a), veh/h	366	1077	913	322	1023	984	372	787	766	399	787	753
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	27.7	18.7	13.7	32.4	16.5	16.5	23.4	16.3	16.3	23.2	16.6	16.6
Incr Delay (d2), s/veh	1.5	1.3	0.1	1.4	0.4	0.5	2.7	1.0	1.1	3.2	1.2	1.3
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	3.0	9.4	1.3	2.3	5.6	5.4	2.5	3.4	3.4	3.1	3.9	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	20.0	13.8	33.7	17.0	17.0	26.1	17.3	17.4	26.4	17.8	18.0
LnGrp LOS	C	C	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		864			906			623			709	
Approach Delay, s/veh		20.9			19.0			19.2			19.9	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		46.3		44.0		46.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		40.0		52.0		40.0		52.0				
Max Q Clear Time (g_c+I1), s		22.5		34.6		23.3		37.0				
Green Ext Time (p_c), s		3.6		5.4		4.0		5.3				

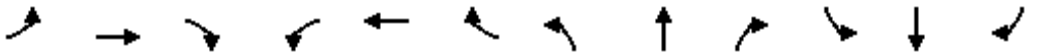
Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	19	84	21	41	59	136	886	63	97	987	172
Future Volume (veh/h)	62	19	84	21	41	59	136	886	63	97	987	172
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	67	20	90	23	44	63	146	953	68	104	1061	185
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	38	108	108	182	236	180	3307	235	164	1895	330
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.68	0.68	0.05	0.63	0.63
Sat Flow, veh/h	442	257	723	390	1217	1585	1781	4866	346	3456	3026	526
Grp Volume(v), veh/h	177	0	0	67	0	63	146	666	355	104	622	624
Grp Sat Flow(s),veh/h/ln	1422	0	0	1607	0	1585	1781	1702	1808	1728	1777	1776
Q Serve(g_s), s	8.8	0.0	0.0	0.0	0.0	3.4	7.8	7.6	7.6	2.9	19.5	19.7
Cycle Q Clear(g_c), s	11.9	0.0	0.0	3.1	0.0	3.4	7.8	7.6	7.6	2.9	19.5	19.7
Prop In Lane	0.38		0.51	0.34		1.00	1.00		0.19	1.00		0.30
Lane Grp Cap(c), veh/h	263	0	0	289	0	236	180	2314	1229	164	1113	1112
V/C Ratio(X)	0.67	0.00	0.00	0.23	0.00	0.27	0.81	0.29	0.29	0.63	0.56	0.56
Avail Cap(c_a), veh/h	393	0	0	431	0	375	330	2314	1229	249	1113	1112
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	0.0	0.0	36.5	0.0	36.6	42.7	6.2	6.2	45.4	10.4	10.5
Incr Delay (d2), s/veh	3.0	0.0	0.0	0.4	0.0	0.6	8.4	0.3	0.6	4.0	2.0	2.0
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	4.3	0.0	0.0	1.4	0.0	1.4	3.8	2.5	2.7	1.3	7.5	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	0.0	0.0	36.9	0.0	37.2	51.2	6.5	6.8	49.4	12.5	12.5
LnGrp LOS	D	A	A	D	A	D	D	A	A	D	B	B
Approach Vol, veh/h		177			130			1167			1350	
Approach Delay, s/veh		43.3			37.0			12.2			15.3	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	70.0		18.5	13.8	64.8		18.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	66.0		23.0	18.0	55.0		23.0				
Max Q Clear Time (g_c+I1), s	4.9	9.6		13.9	9.8	21.7		5.4				
Green Ext Time (p_c), s	0.0	8.8		0.6	0.2	11.0		0.4				

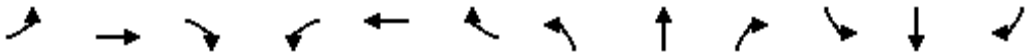
Intersection Summary												
HCM 6th Ctrl Delay			16.8									
HCM 6th LOS			B									



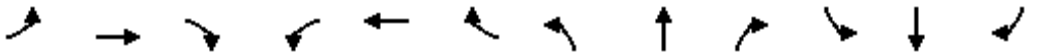
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	156	115	68	324	193	37	749	148	117	651	330
Future Volume (veh/h)	150	156	115	68	324	193	37	749	148	117	651	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	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	177	131	77	368	219	42	851	168	133	740	375
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	898	761	528	527	314	158	1564	697	218	1005	508
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	829	1870	1585	1071	1099	654	505	3554	1585	553	2284	1155
Grp Volume(v), veh/h	170	177	131	77	0	587	42	851	168	133	575	540
Grp Sat Flow(s),veh/h/ln	829	1870	1585	1071	0	1753	505	1777	1585	553	1777	1662
Q Serve(g_s), s	20.2	5.4	4.7	4.4	0.0	26.2	7.5	17.6	6.6	23.3	26.8	26.9
Cycle Q Clear(g_c), s	46.4	5.4	4.7	9.9	0.0	26.2	34.4	17.6	6.6	40.9	26.8	26.9
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	253	898	761	528	0	841	158	1564	697	218	782	731
V/C Ratio(X)	0.67	0.20	0.17	0.15	0.00	0.70	0.27	0.54	0.24	0.61	0.74	0.74
Avail Cap(c_a), veh/h	253	898	761	528	0	841	158	1564	697	218	782	731
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	14.9	14.7	17.8	0.0	20.3	37.5	20.6	17.5	35.7	23.2	23.2
Incr Delay (d2), s/veh	6.8	0.1	0.1	0.1	0.0	2.6	4.1	1.4	0.8	12.1	6.1	6.6
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	4.5	2.3	1.7	1.1	0.0	10.8	1.1	7.4	2.5	3.8	12.1	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	15.0	14.8	17.9	0.0	22.9	41.5	22.0	18.4	47.8	29.3	29.8
LnGrp LOS	D	B	B	B	A	C	D	C	B	D	C	C
Approach Vol, veh/h		478			664			1061			1248	
Approach Delay, s/veh		25.7			22.3			22.2			31.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.0		52.0		48.0		52.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		44.0		48.0		44.0		48.0				
Max Q Clear Time (g_c+I1), s		36.4		48.4		42.9		28.2				
Green Ext Time (p_c), s		4.0		0.0		0.8		4.4				

Intersection Summary												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									



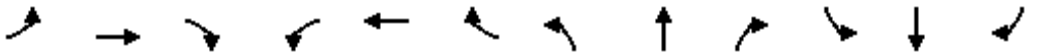
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	14	7	46	15	48	7	501	51	46	327	7
Future Volume (veh/h)	9	14	7	46	15	48	7	501	51	46	327	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	10	15	8	50	16	52	8	545	55	50	355	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	107	44	125	34	71	60	2506	250	311	2189	50
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	287	1039	424	547	325	687	14	3174	316	318	2771	64
Grp Volume(v), veh/h	33	0	0	118	0	0	322	0	286	200	0	213
Grp Sat Flow(s),veh/h/ln	1750	0	0	1560	0	0	1859	0	1645	1462	0	1691
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	3.3	0.0	0.0	2.3
Cycle Q Clear(g_c), s	1.3	0.0	0.0	5.4	0.0	0.0	3.3	0.0	3.3	1.9	0.0	2.3
Prop In Lane	0.30		0.24	0.42		0.44	0.02		0.19	0.25		0.04
Lane Grp Cap(c), veh/h	243	0	0	229	0	0	1517	0	1299	1215	0	1335
V/C Ratio(X)	0.14	0.00	0.00	0.51	0.00	0.00	0.21	0.00	0.22	0.16	0.00	0.16
Avail Cap(c_a), veh/h	786	0	0	746	0	0	1517	0	1299	1215	0	1335
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	0.0	32.4	0.0	0.0	2.0	0.0	2.0	1.8	0.0	1.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.8	0.0	0.0	0.3	0.0	0.4	0.3	0.0	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	0.5	0.0	0.0	2.1	0.0	0.0	0.7	0.0	0.7	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	0.0	34.2	0.0	0.0	2.3	0.0	2.4	2.1	0.0	2.1
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		33			118			608			413	
Approach Delay, s/veh		30.9			34.2			2.3			2.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		11.7		63.0		11.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		59.0		33.0		59.0		33.0				
Max Q Clear Time (g_c+I1), s		5.3		3.3		4.3		7.4				
Green Ext Time (p_c), s		4.3		0.1		3.0		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			6.3									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	287	83	143	437	117	68	253	74	82	295	73
Future Volume (veh/h)	47	287	83	143	437	117	68	253	74	82	295	73
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	55	334	97	166	508	136	79	294	86	95	343	85
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	727	616	341	1079	287	514	1375	395	541	1429	350
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	786	1870	1585	957	2775	739	960	2724	782	1003	2830	692
Grp Volume(v), veh/h	55	334	97	166	324	320	79	190	190	95	214	214
Grp Sat Flow(s),veh/h/ln	786	1870	1585	957	1777	1737	960	1777	1730	1003	1777	1746
Q Serve(g_s), s	4.2	10.0	3.0	11.8	10.3	10.4	3.8	4.5	4.6	4.4	5.1	5.2
Cycle Q Clear(g_c), s	14.6	10.0	3.0	21.8	10.3	10.4	9.0	4.5	4.6	9.0	5.1	5.2
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.45	1.00		0.40
Lane Grp Cap(c), veh/h	293	727	616	341	691	675	514	897	873	541	897	881
V/C Ratio(X)	0.19	0.46	0.16	0.49	0.47	0.47	0.15	0.21	0.22	0.18	0.24	0.24
Avail Cap(c_a), veh/h	551	1342	1137	655	1275	1247	514	897	873	541	897	881
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	22.7	17.1	15.0	25.2	17.2	17.2	13.1	10.3	10.4	12.9	10.5	10.5
Incr Delay (d2), s/veh	0.3	0.5	0.1	1.1	0.5	0.5	0.6	0.5	0.6	0.7	0.6	0.7
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	0.8	4.1	1.0	2.6	4.0	4.0	0.9	1.7	1.7	1.0	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	17.6	15.1	26.3	17.7	17.7	13.7	10.9	10.9	13.6	11.1	11.2
LnGrp LOS	C	B	B	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		486			810			459			523	
Approach Delay, s/veh		17.7			19.5			11.4			11.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		42.0		33.3		42.0		33.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		38.0		54.0		38.0		54.0				
Max Q Clear Time (g_c+I1), s		11.0		16.6		11.0		23.8				
Green Ext Time (p_c), s		2.8		3.0		3.2		5.5				

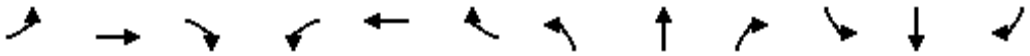
Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	53	53	39	46	144	29	1043	88	139	575	34
Future Volume (veh/h)	114	53	53	39	46	144	29	1043	88	139	575	34
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	134	62	62	46	54	169	34	1227	104	164	676	40
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	91	73	204	217	389	47	2564	217	248	1977	117
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.03	0.53	0.53	0.07	0.58	0.58
Sat Flow, veh/h	573	372	299	566	884	1585	1781	4795	406	3456	3409	202
Grp Volume(v), veh/h	258	0	0	100	0	169	34	871	460	164	352	364
Grp Sat Flow(s),veh/h/ln	1243	0	0	1450	0	1585	1781	1702	1797	1728	1777	1834
Q Serve(g_s), s	12.6	0.0	0.0	0.0	0.0	7.3	1.5	13.0	13.0	3.7	8.4	8.4
Cycle Q Clear(g_c), s	16.5	0.0	0.0	3.9	0.0	7.3	1.5	13.0	13.0	3.7	8.4	8.4
Prop In Lane	0.52		0.24	0.46		1.00	1.00		0.23	1.00		0.11
Lane Grp Cap(c), veh/h	373	0	0	421	0	389	47	1820	961	248	1031	1064
V/C Ratio(X)	0.69	0.00	0.00	0.24	0.00	0.43	0.72	0.48	0.48	0.66	0.34	0.34
Avail Cap(c_a), veh/h	612	0	0	688	0	665	154	1820	961	469	1031	1064
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	0.0	24.4	0.0	25.8	39.2	11.8	11.8	36.7	8.9	8.9
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.3	0.0	0.8	18.8	0.9	1.7	3.0	0.9	0.9
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	4.9	0.0	0.0	1.5	0.0	2.7	0.9	4.7	5.2	1.7	3.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	0.0	0.0	24.7	0.0	26.6	57.9	12.7	13.5	39.7	9.8	9.8
LnGrp LOS	C	A	A	C	A	C	E	B	B	D	A	A
Approach Vol, veh/h		258			269			1365			880	
Approach Delay, s/veh		32.2			25.9			14.1			15.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	47.3		23.9	6.1	51.0		23.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	11.0	43.0		34.0	7.0	47.0		34.0				
Max Q Clear Time (g_c+I1), s	5.7	15.0		18.5	3.5	10.4		9.3				
Green Ext Time (p_c), s	0.2	11.1		1.4	0.0	5.1		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			17.3									
HCM 6th LOS			B									

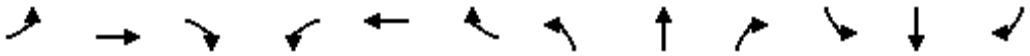


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	313	193	96	153	142	78	755	84	83	510	47
Future Volume (veh/h)	310	313	193	96	153	142	78	755	84	83	510	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	348	352	217	108	172	160	88	848	94	93	573	53
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	453	906	768	382	432	402	325	1539	687	226	1425	132
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1048	1870	1585	843	892	829	799	3554	1585	595	3289	304
Grp Volume(v), veh/h	348	352	217	108	0	332	88	848	94	93	309	317
Grp Sat Flow(s),veh/h/ln	1048	1870	1585	843	0	1721	799	1777	1585	595	1777	1816
Q Serve(g_s), s	30.8	11.6	7.9	9.1	0.0	12.0	8.2	17.2	3.5	13.4	11.6	11.6
Cycle Q Clear(g_c), s	42.7	11.6	7.9	20.6	0.0	12.0	19.9	17.2	3.5	30.6	11.6	11.6
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	453	906	768	382	0	834	325	1539	687	226	770	787
V/C Ratio(X)	0.77	0.39	0.28	0.28	0.00	0.40	0.27	0.55	0.14	0.41	0.40	0.40
Avail Cap(c_a), veh/h	486	965	817	408	0	888	325	1539	687	226	770	787
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	15.9	14.9	22.4	0.0	16.0	25.7	20.5	16.6	31.8	18.9	18.9
Incr Delay (d2), s/veh	6.9	0.3	0.2	0.4	0.0	0.3	2.0	1.4	0.4	5.4	1.6	1.5
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	8.3	4.8	2.8	1.8	0.0	4.6	1.7	7.2	1.3	2.2	5.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	16.2	15.1	22.8	0.0	16.3	27.7	21.9	17.0	37.3	20.4	20.4
LnGrp LOS	D	B	B	C	A	B	C	C	B	D	C	C
Approach Vol, veh/h		917			440			1030			719	
Approach Delay, s/veh		23.6			17.9			21.9			22.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		46.0		51.0		46.0		51.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		42.0		50.0		42.0		50.0				
Max Q Clear Time (g_c+I1), s		21.9		44.7		32.6		22.6				
Green Ext Time (p_c), s		7.0		2.2		3.3		3.0				

Intersection Summary												
HCM 6th Ctrl Delay			22.0									
HCM 6th LOS			C									

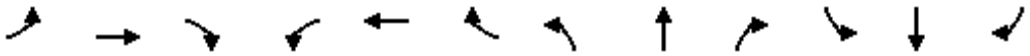
Existing Plus Project LOS Calculation Sheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	61	38	66	18	51	9	503	101	60	566	5
Future Volume (veh/h)	41	61	38	66	18	51	9	503	101	60	566	5
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	53	78	49	85	23	65	12	645	129	77	726	6
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	126	68	161	43	83	59	2146	424	240	2160	18
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	377	839	455	626	290	551	17	2861	565	248	2879	24
Grp Volume(v), veh/h	180	0	0	173	0	0	421	0	365	376	0	433
Grp Sat Flow(s),veh/h/ln	1672	0	0	1468	0	0	1843	0	1600	1453	0	1698
Q Serve(g_s), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	6.8
Cycle Q Clear(g_c), s	8.0	0.0	0.0	9.0	0.0	0.0	5.8	0.0	5.9	5.0	0.0	6.8
Prop In Lane	0.29		0.27	0.49		0.38	0.03		0.35	0.20		0.01
Lane Grp Cap(c), veh/h	309	0	0	287	0	0	1429	0	1201	1144	0	1274
V/C Ratio(X)	0.58	0.00	0.00	0.60	0.00	0.00	0.29	0.00	0.30	0.33	0.00	0.34
Avail Cap(c_a), veh/h	707	0	0	646	0	0	1429	0	1201	1144	0	1274
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	0.0	32.6	0.0	0.0	3.2	0.0	3.2	3.1	0.0	3.3
Incr Delay (d2), s/veh	1.7	0.0	0.0	2.0	0.0	0.0	0.5	0.0	0.7	0.8	0.0	0.7
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	3.4	0.0	0.0	3.3	0.0	0.0	1.6	0.0	1.5	1.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	0.0	34.7	0.0	0.0	3.7	0.0	3.9	3.9	0.0	4.1
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		180			173			786			809	
Approach Delay, s/veh		34.0			34.7			3.8			4.0	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.0		16.0		64.0		16.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		60.0		32.0		60.0		32.0				
Max Q Clear Time (g_c+I1), s		7.9		10.0		8.8		11.0				
Green Ext Time (p_c), s		6.1		1.0		6.8		1.0				

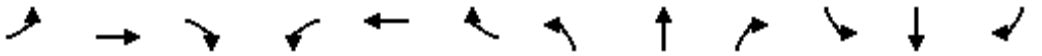
Intersection Summary												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	489	92	92	483	168	111	312	89	136	324	123
Future Volume (veh/h)	138	489	92	92	483	168	111	312	89	136	324	123
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	168	596	112	112	589	205	135	380	109	166	395	150
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	881	747	247	1219	423	368	1199	340	396	1109	416
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	684	1870	1585	741	2587	899	862	2733	775	907	2528	948
Grp Volume(v), veh/h	168	596	112	112	404	390	135	245	244	166	276	269
Grp Sat Flow(s),veh/h/ln	684	1870	1585	741	1777	1709	862	1777	1731	907	1777	1700
Q Serve(g_s), s	19.8	22.0	3.6	12.3	13.8	13.9	11.0	8.0	8.2	13.0	9.2	9.4
Cycle Q Clear(g_c), s	33.7	22.0	3.6	34.3	13.8	13.9	20.4	8.0	8.2	21.2	9.2	9.4
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.45	1.00		0.56
Lane Grp Cap(c), veh/h	296	881	747	247	837	805	368	780	759	396	780	746
V/C Ratio(X)	0.57	0.68	0.15	0.45	0.48	0.48	0.37	0.31	0.32	0.42	0.35	0.36
Avail Cap(c_a), veh/h	382	1115	945	339	1060	1019	368	780	759	396	780	746
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	27.7	18.2	13.4	31.5	16.1	16.1	23.4	16.2	16.3	23.2	16.6	16.6
Incr Delay (d2), s/veh	1.7	1.1	0.1	1.3	0.4	0.5	2.8	1.1	1.1	3.2	1.3	1.4
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	3.3	9.2	1.2	2.2	5.4	5.2	2.5	3.4	3.3	3.0	3.9	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	19.4	13.5	32.8	16.5	16.6	26.2	17.3	17.4	26.5	17.8	18.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		876			906			624			711	
Approach Delay, s/veh		20.5			18.6			19.3			19.9	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.0		45.9		43.0		45.9				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0				
Max Q Clear Time (g_c+I1), s		22.4		35.7		23.2		36.3				
Green Ext Time (p_c), s		3.5		5.5		4.0		5.6				

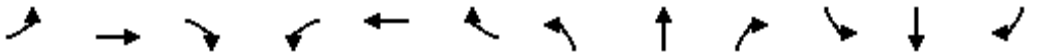
Intersection Summary												
HCM 6th Ctrl Delay			19.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	19	85	21	41	59	138	886	63	97	987	180
Future Volume (veh/h)	64	19	85	21	41	59	138	886	63	97	987	180
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	69	20	91	23	44	63	148	953	68	104	1061	194
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	39	109	112	187	240	184	3255	232	167	1844	336
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.67	0.67	0.05	0.61	0.61
Sat Flow, veh/h	449	257	721	390	1238	1585	1781	4866	346	3456	3001	547
Grp Volume(v), veh/h	180	0	0	67	0	63	148	666	355	104	627	628
Grp Sat Flow(s),veh/h/ln	1427	0	0	1628	0	1585	1781	1702	1808	1728	1777	1772
Q Serve(g_s), s	8.4	0.0	0.0	0.0	0.0	3.2	7.4	7.3	7.4	2.7	19.2	19.3
Cycle Q Clear(g_c), s	11.3	0.0	0.0	2.9	0.0	3.2	7.4	7.3	7.4	2.7	19.2	19.3
Prop In Lane	0.38		0.51	0.34		1.00	1.00		0.19	1.00		0.31
Lane Grp Cap(c), veh/h	270	0	0	299	0	240	184	2277	1209	167	1091	1088
V/C Ratio(X)	0.67	0.00	0.00	0.22	0.00	0.26	0.81	0.29	0.29	0.62	0.57	0.58
Avail Cap(c_a), veh/h	371	0	0	409	0	348	332	2277	1209	265	1091	1088
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	0.0	0.0	34.1	0.0	34.2	40.0	6.2	6.2	42.6	10.5	10.5
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.4	0.0	0.6	8.1	0.3	0.6	3.8	2.2	2.2
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	4.1	0.0	0.0	1.3	0.0	1.3	3.6	2.4	2.6	1.2	7.3	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	0.0	34.4	0.0	34.8	48.1	6.5	6.8	46.3	12.7	12.7
LnGrp LOS	D	A	A	C	A	C	D	A	A	D	B	B
Approach Vol, veh/h		180			130			1169			1359	
Approach Delay, s/veh		40.6			34.6			11.9			15.3	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	65.0		17.8	13.4	60.0		17.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	61.0		20.0	17.0	51.0		20.0				
Max Q Clear Time (g_c+I1), s	4.7	9.4		13.3	9.4	21.3		5.2				
Green Ext Time (p_c), s	0.1	8.8		0.5	0.2	10.7		0.4				

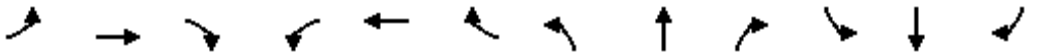
Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	156	115	68	324	193	37	751	148	117	652	330
Future Volume (veh/h)	150	156	115	68	324	193	37	751	148	117	652	330
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	177	131	77	368	219	42	853	168	133	741	375
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	898	761	528	527	314	158	1564	697	217	1005	508
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	829	1870	1585	1071	1099	654	505	3554	1585	552	2285	1154
Grp Volume(v), veh/h	170	177	131	77	0	587	42	853	168	133	576	540
Grp Sat Flow(s),veh/h/ln	829	1870	1585	1071	0	1753	505	1777	1585	552	1777	1663
Q Serve(g_s), s	20.2	5.4	4.7	4.4	0.0	26.2	7.5	17.7	6.6	23.4	26.9	26.9
Cycle Q Clear(g_c), s	46.4	5.4	4.7	9.9	0.0	26.2	34.5	17.7	6.6	41.1	26.9	26.9
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	253	898	761	528	0	841	158	1564	697	217	782	732
V/C Ratio(X)	0.67	0.20	0.17	0.15	0.00	0.70	0.27	0.55	0.24	0.61	0.74	0.74
Avail Cap(c_a), veh/h	253	898	761	528	0	841	158	1564	697	217	782	732
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	14.9	14.7	17.8	0.0	20.3	37.5	20.6	17.5	35.8	23.2	23.2
Incr Delay (d2), s/veh	6.8	0.1	0.1	0.1	0.0	2.6	4.1	1.4	0.8	12.2	6.1	6.6
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	4.5	2.3	1.7	1.1	0.0	10.8	1.1	7.4	2.5	3.8	12.1	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	15.0	14.8	17.9	0.0	22.9	41.6	22.0	18.4	48.0	29.3	29.8
LnGrp LOS	D	B	B	B	A	C	D	C	B	D	C	C
Approach Vol, veh/h		478			664			1063			1249	
Approach Delay, s/veh		25.7			22.3			22.2			31.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.0		52.0		48.0		52.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		44.0		48.0		44.0		48.0				
Max Q Clear Time (g_c+I1), s		36.5		48.4		43.1		28.2				
Green Ext Time (p_c), s		4.0		0.0		0.7		4.4				

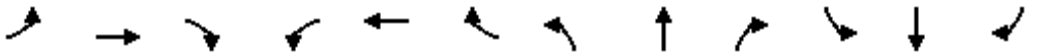
Intersection Summary												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	14	7	56	15	49	7	501	56	46	327	7
Future Volume (veh/h)	9	14	7	56	15	49	7	501	56	46	327	7
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	12	18	9	72	19	63	9	642	72	59	419	9
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	133	53	151	38	83	58	2397	266	297	2073	45
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.76	0.76	0.76	0.76	0.76	0.76
Sat Flow, veh/h	331	1022	406	621	293	633	12	3138	348	311	2714	59
Grp Volume(v), veh/h	39	0	0	154	0	0	384	0	339	229	0	258
Grp Sat Flow(s),veh/h/ln	1758	0	0	1547	0	0	1859	0	1639	1392	0	1691
Q Serve(g_s), s	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	4.7	0.0	0.0	3.2
Cycle Q Clear(g_c), s	1.5	0.0	0.0	7.2	0.0	0.0	4.6	0.0	4.7	2.5	0.0	3.2
Prop In Lane	0.31		0.23	0.47		0.41	0.02		0.21	0.26		0.03
Lane Grp Cap(c), veh/h	292	0	0	272	0	0	1469	0	1252	1123	0	1292
V/C Ratio(X)	0.13	0.00	0.00	0.57	0.00	0.00	0.26	0.00	0.27	0.20	0.00	0.20
Avail Cap(c_a), veh/h	798	0	0	751	0	0	1469	0	1252	1123	0	1292
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	0.0	31.7	0.0	0.0	2.7	0.0	2.7	2.4	0.0	2.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.9	0.0	0.0	0.4	0.0	0.5	0.4	0.0	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	0.6	0.0	0.0	2.8	0.0	0.0	1.2	0.0	1.1	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	0.0	0.0	33.6	0.0	0.0	3.1	0.0	3.2	2.8	0.0	2.8
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		39			154			723			487	
Approach Delay, s/veh		29.5			33.6			3.1			2.8	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.0		13.9		62.0		13.9				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		58.0		34.0		58.0		34.0				
Max Q Clear Time (g_c+I1), s		6.7		3.5		5.2		9.2				
Green Ext Time (p_c), s		5.4		0.2		3.7		0.9				

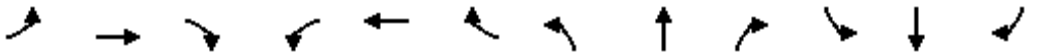
Intersection Summary												
HCM 6th Ctrl Delay			7.1									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	287	83	143	437	117	68	253	74	82	296	81
Future Volume (veh/h)	51	287	83	143	437	117	68	253	74	82	296	81
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	62	350	101	174	533	143	83	309	90	100	361	99
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	753	639	341	1117	298	482	1351	387	515	1370	371
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	763	1870	1585	940	2773	741	932	2726	781	986	2764	748
Grp Volume(v), veh/h	62	350	101	174	341	335	83	200	199	100	230	230
Grp Sat Flow(s),veh/h/ln	763	1870	1585	940	1777	1737	932	1777	1730	986	1777	1736
Q Serve(g_s), s	5.2	10.8	3.2	13.1	11.2	11.2	4.5	5.0	5.2	5.1	5.9	6.1
Cycle Q Clear(g_c), s	16.4	10.8	3.2	24.0	11.2	11.2	10.5	5.0	5.2	10.2	5.9	6.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.45	1.00		0.43
Lane Grp Cap(c), veh/h	290	753	639	341	716	700	482	880	857	515	880	860
V/C Ratio(X)	0.21	0.46	0.16	0.51	0.48	0.48	0.17	0.23	0.23	0.19	0.26	0.27
Avail Cap(c_a), veh/h	496	1259	1067	595	1197	1170	482	880	857	515	880	860
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	23.5	17.3	15.0	26.1	17.4	17.4	14.6	11.3	11.3	14.2	11.5	11.5
Incr Delay (d2), s/veh	0.4	0.4	0.1	1.2	0.5	0.5	0.8	0.6	0.6	0.8	0.7	0.8
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	0.9	4.5	1.1	2.9	4.4	4.3	1.0	2.0	2.0	1.2	2.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	17.7	15.1	27.2	17.9	17.9	15.4	11.9	12.0	15.1	12.2	12.3
LnGrp LOS	C	B	B	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		513			850			482			560	
Approach Delay, s/veh		17.9			19.8			12.5			12.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.0		35.7		43.0		35.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0				
Max Q Clear Time (g_c+I1), s		12.5		18.4		12.2		26.0				
Green Ext Time (p_c), s		3.0		3.2		3.5		5.7				

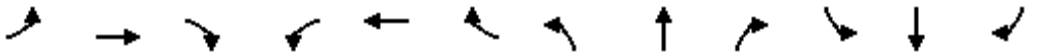
Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	53	55	39	46	144	30	1043	88	139	575	37
Future Volume (veh/h)	121	53	55	39	46	144	30	1043	88	139	575	37
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	130	57	59	42	49	155	32	1122	95	149	618	40
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	86	71	200	211	368	46	2627	222	232	1996	129
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.55	0.55	0.07	0.59	0.59
Sat Flow, veh/h	596	372	305	572	906	1585	1781	4796	406	3456	3389	219
Grp Volume(v), veh/h	246	0	0	91	0	155	32	796	421	149	324	334
Grp Sat Flow(s),veh/h/ln	1273	0	0	1478	0	1585	1781	1702	1797	1728	1777	1831
Q Serve(g_s), s	11.4	0.0	0.0	0.0	0.0	6.5	1.4	10.8	10.9	3.3	7.2	7.2
Cycle Q Clear(g_c), s	14.8	0.0	0.0	3.4	0.0	6.5	1.4	10.8	10.9	3.3	7.2	7.2
Prop In Lane	0.53		0.24	0.46		1.00	1.00		0.23	1.00		0.12
Lane Grp Cap(c), veh/h	366	0	0	411	0	368	46	1864	984	232	1047	1079
V/C Ratio(X)	0.67	0.00	0.00	0.22	0.00	0.42	0.70	0.43	0.43	0.64	0.31	0.31
Avail Cap(c_a), veh/h	661	0	0	739	0	707	182	1864	984	440	1047	1079
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	0.0	24.3	0.0	25.6	38.0	10.5	10.5	35.7	8.1	8.1
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.3	0.0	0.8	17.7	0.7	1.4	3.0	0.8	0.7
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	4.5	0.0	0.0	1.4	0.0	2.5	0.8	3.8	4.2	1.5	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	0.0	24.6	0.0	26.4	55.7	11.2	11.8	38.7	8.9	8.9
LnGrp LOS	C	A	A	C	A	C	E	B	B	D	A	A
Approach Vol, veh/h		246			246			1249			807	
Approach Delay, s/veh		31.4			25.7			12.6			14.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	47.0		22.2	6.0	50.2		22.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	10.0	43.0		35.0	8.0	45.0		35.0				
Max Q Clear Time (g_c+I1), s	5.3	12.9		16.8	3.4	9.2		8.5				
Green Ext Time (p_c), s	0.2	10.1		1.4	0.0	4.6		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		16.2	
HCM 6th LOS		B	

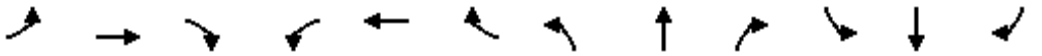


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	313	193	96	153	142	78	756	84	83	512	47
Future Volume (veh/h)	310	313	193	96	153	142	78	756	84	83	512	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	352	356	219	109	174	161	89	859	95	94	582	53
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	460	919	778	386	439	406	314	1513	675	218	1403	127
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1045	1870	1585	838	894	827	793	3554	1585	588	3294	299
Grp Volume(v), veh/h	352	356	219	109	0	335	89	859	95	94	313	322
Grp Sat Flow(s),veh/h/ln	1045	1870	1585	838	0	1721	793	1777	1585	588	1777	1816
Q Serve(g_s), s	30.9	11.5	7.9	9.0	0.0	11.8	8.5	17.6	3.5	13.9	11.8	11.9
Cycle Q Clear(g_c), s	42.7	11.5	7.9	20.6	0.0	11.8	20.4	17.6	3.5	31.5	11.8	11.9
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	460	919	778	386	0	845	314	1513	675	218	757	773
V/C Ratio(X)	0.77	0.39	0.28	0.28	0.00	0.40	0.28	0.57	0.14	0.43	0.41	0.42
Avail Cap(c_a), veh/h	500	991	840	418	0	912	314	1513	675	218	757	773
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	15.4	14.5	21.9	0.0	15.5	26.4	20.9	16.9	32.9	19.3	19.3
Incr Delay (d2), s/veh	6.5	0.3	0.2	0.4	0.0	0.3	2.2	1.5	0.4	6.1	1.7	1.6
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	8.3	4.8	2.8	1.8	0.0	4.5	1.8	7.4	1.3	2.3	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	15.7	14.7	22.3	0.0	15.8	28.6	22.5	17.3	39.0	20.9	20.9
LnGrp LOS	D	B	B	C	A	B	C	C	B	D	C	C
Approach Vol, veh/h		927			444			1043			729	
Approach Delay, s/veh		22.9			17.4			22.5			23.3	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		45.0		51.3		45.0		51.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		41.0		51.0		41.0		51.0				
Max Q Clear Time (g_c+I1), s		22.4		44.7		33.5		22.6				
Green Ext Time (p_c), s		6.9		2.6		2.8		3.0				

Intersection Summary												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									

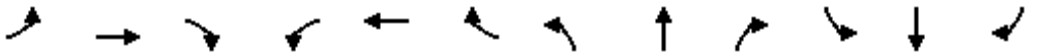
Opening Year 2023 Without Project LOS Calculation Sheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	62	38	64	18	52	9	508	91	60	572	5
Future Volume (veh/h)	41	62	38	64	18	52	9	508	91	60	572	5
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	53	79	49	82	23	67	12	651	117	77	733	6
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	125	67	155	43	85	59	2195	390	239	2173	18
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	375	841	451	604	293	572	18	2915	517	247	2886	23
Grp Volume(v), veh/h	181	0	0	172	0	0	416	0	364	380	0	436
Grp Sat Flow(s),veh/h/ln	1667	0	0	1469	0	0	1842	0	1609	1458	0	1698
Q Serve(g_s), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	5.9	0.0	0.0	6.9
Cycle Q Clear(g_c), s	8.2	0.0	0.0	9.1	0.0	0.0	5.7	0.0	5.9	5.1	0.0	6.9
Prop In Lane	0.29		0.27	0.48		0.39	0.03		0.32	0.20		0.01
Lane Grp Cap(c), veh/h	305	0	0	284	0	0	1432	0	1211	1151	0	1278
V/C Ratio(X)	0.59	0.00	0.00	0.61	0.00	0.00	0.29	0.00	0.30	0.33	0.00	0.34
Avail Cap(c_a), veh/h	678	0	0	621	0	0	1432	0	1211	1151	0	1278
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	0.0	33.1	0.0	0.0	3.2	0.0	3.2	3.1	0.0	3.3
Incr Delay (d2), s/veh	1.8	0.0	0.0	2.1	0.0	0.0	0.5	0.0	0.6	0.8	0.0	0.7
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	3.4	0.0	0.0	3.3	0.0	0.0	1.6	0.0	1.5	1.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	0.0	35.2	0.0	0.0	3.7	0.0	3.8	3.9	0.0	4.1
LnGrp LOS	C	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		181			172			780			816	
Approach Delay, s/veh		34.7			35.2			3.8			4.0	
Approach LOS		C			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		16.0		65.0		16.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		61.0		31.0		61.0		31.0				
Max Q Clear Time (g_c+I1), s		7.9		10.2		8.9		11.1				
Green Ext Time (p_c), s		6.0		1.0		6.9		0.9				

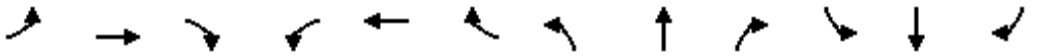
Intersection Summary												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	494	93	93	488	170	112	314	90	137	327	122
Future Volume (veh/h)	129	494	93	93	488	170	112	314	90	137	327	122
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	157	602	113	113	595	207	137	383	110	167	399	149
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	888	752	246	1228	426	363	1191	338	390	1108	409
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	678	1870	1585	736	2587	898	859	2732	775	904	2541	937
Grp Volume(v), veh/h	157	602	113	113	408	394	137	247	246	167	278	270
Grp Sat Flow(s),veh/h/ln	678	1870	1585	736	1777	1709	859	1777	1731	904	1777	1702
Q Serve(g_s), s	18.4	22.3	3.6	12.6	14.0	14.1	11.4	8.2	8.3	13.3	9.3	9.5
Cycle Q Clear(g_c), s	32.5	22.3	3.6	34.9	14.0	14.1	20.9	8.2	8.3	21.7	9.3	9.5
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.45	1.00		0.55
Lane Grp Cap(c), veh/h	296	888	752	246	843	811	363	775	754	390	775	742
V/C Ratio(X)	0.53	0.68	0.15	0.46	0.48	0.49	0.38	0.32	0.33	0.43	0.36	0.36
Avail Cap(c_a), veh/h	376	1108	939	333	1053	1012	363	775	754	390	775	742
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	27.1	18.2	13.3	31.7	16.0	16.0	23.9	16.5	16.6	23.7	16.9	16.9
Incr Delay (d2), s/veh	1.5	1.2	0.1	1.3	0.4	0.5	3.0	1.1	1.1	3.4	1.3	1.4
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	3.0	9.3	1.3	2.3	5.5	5.3	2.5	3.4	3.4	3.1	3.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	19.4	13.4	33.0	16.5	16.5	26.9	17.6	17.7	27.1	18.2	18.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		872			915			630			715	
Approach Delay, s/veh		20.3			18.5			19.7			20.3	
Approach LOS		C			B			B			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.0		46.5		43.0		46.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0				
Max Q Clear Time (g_c+I1), s		22.9		34.5		23.7		36.9				
Green Ext Time (p_c), s		3.5		5.7		3.9		5.6				

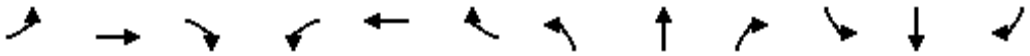
Intersection Summary												
HCM 6th Ctrl Delay			19.7									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	19	85	21	41	60	137	895	64	98	997	174
Future Volume (veh/h)	63	19	85	21	41	60	137	895	64	98	997	174
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	68	20	91	23	44	65	147	962	69	105	1072	187
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	38	108	111	185	237	181	3267	234	168	1871	326
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.67	0.67	0.05	0.62	0.62
Sat Flow, veh/h	443	257	724	389	1234	1585	1781	4864	348	3456	3026	526
Grp Volume(v), veh/h	179	0	0	67	0	65	147	673	358	105	628	631
Grp Sat Flow(s),veh/h/ln	1425	0	0	1623	0	1585	1781	1702	1808	1728	1777	1776
Q Serve(g_s), s	8.5	0.0	0.0	0.0	0.0	3.4	7.5	7.5	7.5	2.8	19.3	19.4
Cycle Q Clear(g_c), s	11.4	0.0	0.0	2.9	0.0	3.4	7.5	7.5	7.5	2.8	19.3	19.4
Prop In Lane	0.38		0.51	0.34		1.00	1.00		0.19	1.00		0.30
Lane Grp Cap(c), veh/h	267	0	0	295	0	237	181	2287	1214	168	1099	1098
V/C Ratio(X)	0.67	0.00	0.00	0.23	0.00	0.27	0.81	0.29	0.30	0.63	0.57	0.57
Avail Cap(c_a), veh/h	350	0	0	386	0	326	289	2287	1214	262	1099	1098
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	0.0	34.6	0.0	34.8	40.6	6.2	6.2	43.1	10.4	10.4
Incr Delay (d2), s/veh	3.1	0.0	0.0	0.4	0.0	0.6	8.8	0.3	0.6	3.8	2.2	2.2
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	4.1	0.0	0.0	1.3	0.0	1.3	3.7	2.4	2.7	1.3	7.4	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	0.0	0.0	35.0	0.0	35.4	49.4	6.5	6.8	46.9	12.6	12.6
LnGrp LOS	D	A	A	C	A	D	D	A	A	D	B	B
Approach Vol, veh/h		179			132			1178			1364	
Approach Delay, s/veh		41.4			35.2			12.0			15.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	66.0		17.8	13.4	61.1		17.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	62.0		19.0	15.0	54.0		19.0				
Max Q Clear Time (g_c+I1), s	4.8	9.5		13.4	9.5	21.4		5.4				
Green Ext Time (p_c), s	0.1	8.9		0.4	0.2	11.1		0.4				

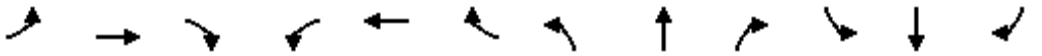
Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	158	116	69	327	195	37	757	149	118	658	333
Future Volume (veh/h)	152	158	116	69	327	195	37	757	149	118	658	333
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	173	180	132	78	372	222	42	860	169	134	748	378
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	898	761	525	527	314	155	1564	697	215	1006	507
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	823	1870	1585	1067	1098	655	500	3554	1585	548	2287	1153
Grp Volume(v), veh/h	173	180	132	78	0	594	42	860	169	134	581	545
Grp Sat Flow(s),veh/h/ln	823	1870	1585	1067	0	1752	500	1777	1585	548	1777	1663
Q Serve(g_s), s	20.9	5.5	4.7	4.5	0.0	26.7	7.6	17.9	6.7	23.9	27.2	27.3
Cycle Q Clear(g_c), s	47.6	5.5	4.7	10.1	0.0	26.7	34.9	17.9	6.7	41.8	27.2	27.3
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	248	898	761	525	0	841	155	1564	697	215	782	732
V/C Ratio(X)	0.70	0.20	0.17	0.15	0.00	0.71	0.27	0.55	0.24	0.62	0.74	0.75
Avail Cap(c_a), veh/h	248	898	761	525	0	841	155	1564	697	215	782	732
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	15.0	14.7	17.9	0.0	20.5	37.9	20.7	17.6	36.1	23.3	23.3
Incr Delay (d2), s/veh	8.4	0.1	0.1	0.1	0.0	2.7	4.2	1.4	0.8	12.8	6.3	6.8
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	4.7	2.3	1.7	1.1	0.0	11.0	1.1	7.5	2.6	3.9	12.3	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	15.1	14.9	18.0	0.0	23.2	42.1	22.1	18.4	49.0	29.6	30.1
LnGrp LOS	D	B	B	B	A	C	D	C	B	D	C	C
Approach Vol, veh/h		485			672			1071			1260	
Approach Delay, s/veh		26.6			22.6			22.3			31.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.0		52.0		48.0		52.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		44.0		48.0		44.0		48.0				
Max Q Clear Time (g_c+I1), s		36.9		49.6		43.8		28.7				
Green Ext Time (p_c), s		3.8		0.0		0.2		4.4				

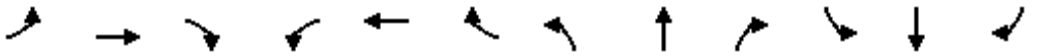
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	14	7	47	15	49	7	509	52	47	332	7
Future Volume (veh/h)	9	14	7	47	15	49	7	509	52	47	332	7
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	12	18	9	60	19	63	9	653	67	60	426	9
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	124	49	132	38	83	57	2458	250	301	2101	45
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.78	0.78	0.78	0.78	0.78	0.78
Sat Flow, veh/h	322	1029	405	548	318	691	12	3168	322	312	2707	58
Grp Volume(v), veh/h	39	0	0	142	0	0	387	0	342	232	0	263
Grp Sat Flow(s),veh/h/ln	1756	0	0	1557	0	0	1858	0	1644	1385	0	1692
Q Serve(g_s), s	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	4.6	0.0	0.0	3.2
Cycle Q Clear(g_c), s	1.5	0.0	0.0	6.8	0.0	0.0	4.5	0.0	4.6	2.5	0.0	3.2
Prop In Lane	0.31		0.23	0.42		0.44	0.02		0.20	0.26		0.03
Lane Grp Cap(c), veh/h	273	0	0	254	0	0	1490	0	1276	1134	0	1313
V/C Ratio(X)	0.14	0.00	0.00	0.56	0.00	0.00	0.26	0.00	0.27	0.20	0.00	0.20
Avail Cap(c_a), veh/h	741	0	0	700	0	0	1490	0	1276	1134	0	1313
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	0.0	32.8	0.0	0.0	2.4	0.0	2.5	2.2	0.0	2.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.9	0.0	0.0	0.4	0.0	0.5	0.4	0.0	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	0.7	0.0	0.0	2.6	0.0	0.0	1.1	0.0	1.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	0.0	34.7	0.0	0.0	2.9	0.0	3.0	2.6	0.0	2.6
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		39			142			729			495	
Approach Delay, s/veh		30.8			34.7			2.9			2.6	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.0		13.3		64.0		13.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		60.0		32.0		60.0		32.0				
Max Q Clear Time (g_c+I1), s		6.6		3.5		5.2		8.8				
Green Ext Time (p_c), s		5.4		0.2		3.7		0.8				

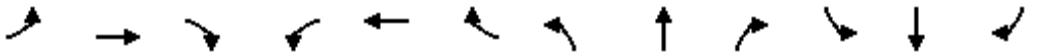
Intersection Summary												
HCM 6th Ctrl Delay			6.8									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	291	84	145	444	119	69	257	75	83	299	74
Future Volume (veh/h)	48	291	84	145	444	119	69	257	75	83	299	74
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	59	355	102	177	541	145	84	313	91	101	365	90
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	763	647	342	1132	302	479	1340	383	507	1391	339
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	756	1870	1585	934	2774	740	936	2727	780	981	2833	690
Grp Volume(v), veh/h	59	355	102	177	346	340	84	202	202	101	227	228
Grp Sat Flow(s),veh/h/ln	756	1870	1585	934	1777	1737	936	1777	1730	981	1777	1746
Q Serve(g_s), s	4.9	11.0	3.2	13.6	11.4	11.4	4.6	5.2	5.3	5.2	5.9	6.1
Cycle Q Clear(g_c), s	16.4	11.0	3.2	24.6	11.4	11.4	10.6	5.2	5.3	10.6	5.9	6.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.45	1.00		0.40
Lane Grp Cap(c), veh/h	290	763	647	342	725	709	479	873	850	507	873	858
V/C Ratio(X)	0.20	0.47	0.16	0.52	0.48	0.48	0.18	0.23	0.24	0.20	0.26	0.27
Avail Cap(c_a), veh/h	486	1249	1058	585	1186	1160	479	873	850	507	873	858
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	23.3	17.2	14.9	26.1	17.3	17.3	14.9	11.6	11.6	14.7	11.8	11.8
Incr Delay (d2), s/veh	0.3	0.4	0.1	1.2	0.5	0.5	0.8	0.6	0.7	0.9	0.7	0.8
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	0.9	4.5	1.1	3.0	4.5	4.4	1.0	2.0	2.1	1.2	2.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	17.6	15.0	27.4	17.8	17.8	15.7	12.2	12.3	15.6	12.5	12.6
LnGrp LOS	C	B	B	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		516			863			488			556	
Approach Delay, s/veh		17.8			19.7			12.9			13.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.0		36.4		43.0		36.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0				
Max Q Clear Time (g_c+I1), s		12.6		18.4		12.6		26.6				
Green Ext Time (p_c), s		3.0		3.2		3.4		5.8				

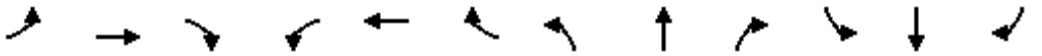
Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	54	54	40	47	146	29	1059	89	141	584	35
Future Volume (veh/h)	116	54	54	40	47	146	29	1059	89	141	584	35
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	125	58	58	43	51	157	31	1139	96	152	628	38
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	89	70	196	210	363	45	2637	222	235	2017	122
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.55	0.55	0.07	0.59	0.59
Sat Flow, veh/h	578	387	306	564	916	1585	1781	4798	404	3456	3404	206
Grp Volume(v), veh/h	241	0	0	94	0	157	31	808	427	152	327	339
Grp Sat Flow(s),veh/h/ln	1271	0	0	1480	0	1585	1781	1702	1798	1728	1777	1833
Q Serve(g_s), s	11.0	0.0	0.0	0.0	0.0	6.6	1.4	11.0	11.0	3.4	7.2	7.2
Cycle Q Clear(g_c), s	14.5	0.0	0.0	3.5	0.0	6.6	1.4	11.0	11.0	3.4	7.2	7.2
Prop In Lane	0.52		0.24	0.46		1.00	1.00		0.22	1.00		0.11
Lane Grp Cap(c), veh/h	361	0	0	406	0	363	45	1871	988	235	1053	1086
V/C Ratio(X)	0.67	0.00	0.00	0.23	0.00	0.43	0.69	0.43	0.43	0.65	0.31	0.31
Avail Cap(c_a), veh/h	663	0	0	743	0	709	182	1871	988	442	1053	1086
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	0.0	24.5	0.0	25.8	37.8	10.4	10.4	35.5	8.0	8.0
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.3	0.0	0.8	17.6	0.7	1.4	3.0	0.8	0.7
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	4.4	0.0	0.0	1.4	0.0	2.5	0.8	3.8	4.2	1.5	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	0.0	24.8	0.0	26.6	55.4	11.1	11.8	38.5	8.7	8.7
LnGrp LOS	C	A	A	C	A	C	E	B	B	D	A	A
Approach Vol, veh/h		241			251			1266			818	
Approach Delay, s/veh		31.4			25.9			12.4			14.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	47.0		21.9	6.0	50.4		21.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	10.0	43.0		35.0	8.0	45.0		35.0				
Max Q Clear Time (g_c+I1), s	5.4	13.0		16.5	3.4	9.2		8.6				
Green Ext Time (p_c), s	0.2	10.3		1.4	0.0	4.6		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.1									
HCM 6th LOS			B									

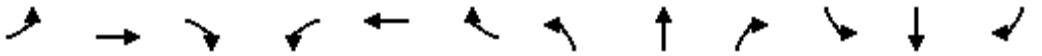


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	318	196	97	155	144	79	766	85	84	518	48
Future Volume (veh/h)	315	318	196	97	155	144	79	766	85	84	518	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	358	361	223	110	176	164	90	870	97	95	589	55
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	461	928	786	386	442	412	306	1498	668	210	1385	129
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1040	1870	1585	831	891	830	786	3554	1585	581	3286	306
Grp Volume(v), veh/h	358	361	223	110	0	340	90	870	97	95	318	326
Grp Sat Flow(s),veh/h/ln	1040	1870	1585	831	0	1721	786	1777	1585	581	1777	1815
Q Serve(g_s), s	32.0	11.7	8.0	9.3	0.0	12.1	8.9	18.2	3.7	14.6	12.3	12.3
Cycle Q Clear(g_c), s	44.1	11.7	8.0	21.0	0.0	12.1	21.2	18.2	3.7	32.8	12.3	12.3
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	461	928	786	386	0	854	306	1498	668	210	749	765
V/C Ratio(X)	0.78	0.39	0.28	0.28	0.00	0.40	0.29	0.58	0.15	0.45	0.42	0.43
Avail Cap(c_a), veh/h	491	981	831	410	0	902	306	1498	668	210	749	765
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	15.3	14.4	21.8	0.0	15.4	27.3	21.5	17.3	34.1	19.8	19.8
Incr Delay (d2), s/veh	7.3	0.3	0.2	0.4	0.0	0.3	2.4	1.7	0.5	6.9	1.8	1.7
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	8.6	4.9	2.8	1.8	0.0	4.6	1.8	7.7	1.4	2.4	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	15.6	14.6	22.2	0.0	15.7	29.7	23.2	17.8	41.0	21.6	21.6
LnGrp LOS	D	B	B	C	A	B	C	C	B	D	C	C
Approach Vol, veh/h		942			450			1057			739	
Approach Delay, s/veh		23.3			17.3			23.3			24.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		45.0		52.3		45.0		52.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		41.0		51.0		41.0		51.0				
Max Q Clear Time (g_c+I1), s		23.2		46.1		34.8		23.0				
Green Ext Time (p_c), s		6.8		2.2		2.5		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			22.6									
HCM 6th LOS			C									

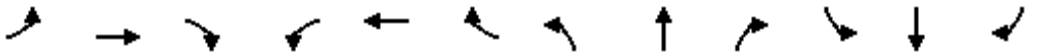
Opening Year 2023 With Project LOS Calculation Sheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	62	38	67	18	52	9	508	102	61	572	5
Future Volume (veh/h)	41	62	38	67	18	52	9	508	102	61	572	5
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	53	79	49	86	23	67	12	651	131	78	733	6
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	128	69	161	43	85	59	2138	425	240	2150	17
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	373	844	452	622	286	558	17	2858	568	248	2873	23
Grp Volume(v), veh/h	181	0	0	176	0	0	425	0	369	379	0	438
Grp Sat Flow(s),veh/h/ln	1669	0	0	1466	0	0	1843	0	1600	1447	0	1698
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	6.1	0.0	0.0	7.0
Cycle Q Clear(g_c), s	8.1	0.0	0.0	9.2	0.0	0.0	5.9	0.0	6.1	5.1	0.0	7.0
Prop In Lane	0.29		0.27	0.49		0.38	0.03		0.35	0.21		0.01
Lane Grp Cap(c), veh/h	312	0	0	290	0	0	1425	0	1197	1137	0	1270
V/C Ratio(X)	0.58	0.00	0.00	0.61	0.00	0.00	0.30	0.00	0.31	0.33	0.00	0.34
Avail Cap(c_a), veh/h	705	0	0	644	0	0	1425	0	1197	1137	0	1270
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	0.0	32.6	0.0	0.0	3.3	0.0	3.3	3.2	0.0	3.4
Incr Delay (d2), s/veh	1.7	0.0	0.0	2.1	0.0	0.0	0.5	0.0	0.7	0.8	0.0	0.7
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	3.4	0.0	0.0	3.4	0.0	0.0	1.7	0.0	1.5	1.5	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	0.0	0.0	34.7	0.0	0.0	3.8	0.0	4.0	4.0	0.0	4.2
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		181			176			794			817	
Approach Delay, s/veh		33.9			34.7			3.9			4.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.0		16.2		64.0		16.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		60.0		32.0		60.0		32.0				
Max Q Clear Time (g_c+I1), s		8.1		10.1		9.0		11.2				
Green Ext Time (p_c), s		6.2		1.0		6.9		1.0				

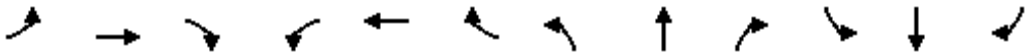
Intersection Summary												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	494	93	93	488	170	112	315	90	137	327	124
Future Volume (veh/h)	139	494	93	93	488	170	112	315	90	137	327	124
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	602	113	113	595	207	137	384	110	167	399	151
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	888	752	246	1228	426	362	1192	337	390	1103	412
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	678	1870	1585	736	2587	898	858	2734	774	903	2531	946
Grp Volume(v), veh/h	170	602	113	113	408	394	137	248	246	167	279	271
Grp Sat Flow(s),veh/h/ln	678	1870	1585	736	1777	1709	858	1777	1731	903	1777	1700
Q Serve(g_s), s	20.4	22.3	3.6	12.6	14.0	14.1	11.4	8.2	8.4	13.3	9.4	9.6
Cycle Q Clear(g_c), s	34.5	22.3	3.6	34.9	14.0	14.1	21.0	8.2	8.4	21.7	9.4	9.6
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.45	1.00		0.56
Lane Grp Cap(c), veh/h	296	888	752	246	843	811	362	775	755	390	775	741
V/C Ratio(X)	0.57	0.68	0.15	0.46	0.48	0.49	0.38	0.32	0.33	0.43	0.36	0.37
Avail Cap(c_a), veh/h	376	1108	939	333	1053	1012	362	775	755	390	775	741
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	27.8	18.2	13.3	31.7	16.0	16.0	24.0	16.5	16.6	23.7	16.9	16.9
Incr Delay (d2), s/veh	1.8	1.2	0.1	1.3	0.4	0.5	3.0	1.1	1.1	3.4	1.3	1.4
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	3.3	9.3	1.3	2.3	5.5	5.3	2.5	3.4	3.4	3.1	4.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	19.4	13.4	33.0	16.5	16.5	27.0	17.6	17.7	27.1	18.2	18.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		885			915			631			717	
Approach Delay, s/veh		20.6			18.5			19.7			20.3	
Approach LOS		C			B			B			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.0		46.5		43.0		46.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0				
Max Q Clear Time (g_c+I1), s		23.0		36.5		23.7		36.9				
Green Ext Time (p_c), s		3.5		5.5		3.9		5.6				

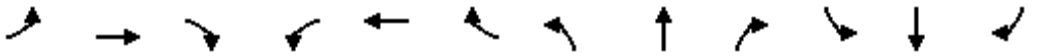
Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	19	86	21	41	60	139	895	64	98	997	182
Future Volume (veh/h)	65	19	86	21	41	60	139	895	64	98	997	182
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	70	20	92	23	44	65	149	962	69	105	1072	196
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	39	110	112	188	242	184	3246	232	168	1839	335
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.67	0.67	0.05	0.61	0.61
Sat Flow, veh/h	451	254	720	390	1232	1585	1781	4864	348	3456	3001	547
Grp Volume(v), veh/h	182	0	0	67	0	65	149	673	358	105	633	635
Grp Sat Flow(s),veh/h/ln	1425	0	0	1623	0	1585	1781	1702	1808	1728	1777	1772
Q Serve(g_s), s	8.6	0.0	0.0	0.0	0.0	3.3	7.5	7.5	7.5	2.7	19.6	19.8
Cycle Q Clear(g_c), s	11.4	0.0	0.0	2.9	0.0	3.3	7.5	7.5	7.5	2.7	19.6	19.8
Prop In Lane	0.38		0.51	0.34		1.00	1.00		0.19	1.00		0.31
Lane Grp Cap(c), veh/h	272	0	0	300	0	242	184	2272	1207	168	1089	1086
V/C Ratio(X)	0.67	0.00	0.00	0.22	0.00	0.27	0.81	0.30	0.30	0.62	0.58	0.58
Avail Cap(c_a), veh/h	370	0	0	408	0	347	312	2272	1207	265	1089	1086
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	0.0	0.0	34.0	0.0	34.2	40.1	6.3	6.3	42.7	10.6	10.7
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.4	0.0	0.6	8.2	0.3	0.6	3.8	2.3	2.3
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	4.1	0.0	0.0	1.3	0.0	1.3	3.7	2.4	2.7	1.2	7.5	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	0.0	34.4	0.0	34.8	48.3	6.6	6.9	46.4	12.9	13.0
LnGrp LOS	D	A	A	C	A	C	D	A	A	D	B	B
Approach Vol, veh/h		182			132			1180			1373	
Approach Delay, s/veh		40.6			34.6			12.0			15.5	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	65.0		17.9	13.4	60.0		17.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	61.0		20.0	16.0	52.0		20.0				
Max Q Clear Time (g_c+I1), s	4.7	9.5		13.4	9.5	21.8		5.3				
Green Ext Time (p_c), s	0.1	8.9		0.5	0.2	10.9		0.4				

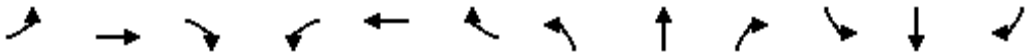
Intersection Summary			
HCM 6th Ctrl Delay		16.5	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	158	116	69	327	195	37	759	149	118	659	333
Future Volume (veh/h)	152	158	116	69	327	195	37	759	149	118	659	333
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	173	180	132	78	372	222	42	862	169	134	749	378
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	898	761	525	527	314	155	1564	697	215	1007	507
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	823	1870	1585	1067	1098	655	500	3554	1585	547	2288	1152
Grp Volume(v), veh/h	173	180	132	78	0	594	42	862	169	134	581	546
Grp Sat Flow(s),veh/h/ln	823	1870	1585	1067	0	1752	500	1777	1585	547	1777	1663
Q Serve(g_s), s	20.9	5.5	4.7	4.5	0.0	26.7	7.6	17.9	6.7	24.0	27.2	27.3
Cycle Q Clear(g_c), s	47.6	5.5	4.7	10.1	0.0	26.7	35.0	17.9	6.7	41.9	27.2	27.3
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	248	898	761	525	0	841	155	1564	697	215	782	732
V/C Ratio(X)	0.70	0.20	0.17	0.15	0.00	0.71	0.27	0.55	0.24	0.62	0.74	0.75
Avail Cap(c_a), veh/h	248	898	761	525	0	841	155	1564	697	215	782	732
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	15.0	14.7	17.9	0.0	20.5	37.9	20.7	17.6	36.2	23.3	23.3
Incr Delay (d2), s/veh	8.4	0.1	0.1	0.1	0.0	2.7	4.2	1.4	0.8	13.0	6.3	6.8
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	4.7	2.3	1.7	1.1	0.0	11.0	1.1	7.5	2.6	3.9	12.3	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	15.1	14.9	18.0	0.0	23.2	42.2	22.1	18.4	49.1	29.6	30.1
LnGrp LOS	D	B	B	B	A	C	D	C	B	D	C	C
Approach Vol, veh/h		485			672			1073			1261	
Approach Delay, s/veh		26.6			22.6			22.3			31.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.0		52.0		48.0		52.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		44.0		48.0		44.0		48.0				
Max Q Clear Time (g_c+I1), s		37.0		49.6		43.9		28.7				
Green Ext Time (p_c), s		3.8		0.0		0.1		4.4				

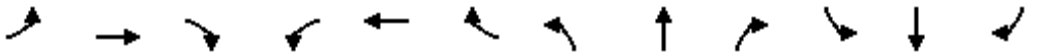
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	14	7	57	15	50	7	509	57	47	332	7
Future Volume (veh/h)	9	14	7	57	15	50	7	509	57	47	332	7
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	12	18	9	73	19	64	9	653	73	60	426	9
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	134	53	150	38	83	57	2401	266	296	2069	44
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.76	0.76	0.76	0.76	0.76	0.76
Sat Flow, veh/h	334	1019	406	623	288	634	12	3139	347	311	2706	58
Grp Volume(v), veh/h	39	0	0	156	0	0	390	0	345	232	0	263
Grp Sat Flow(s),veh/h/ln	1759	0	0	1546	0	0	1859	0	1640	1383	0	1692
Q Serve(g_s), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	3.3
Cycle Q Clear(g_c), s	1.5	0.0	0.0	7.4	0.0	0.0	4.8	0.0	4.8	2.6	0.0	3.3
Prop In Lane	0.31		0.23	0.47		0.41	0.02		0.21	0.26		0.03
Lane Grp Cap(c), veh/h	292	0	0	272	0	0	1469	0	1254	1116	0	1294
V/C Ratio(X)	0.13	0.00	0.00	0.57	0.00	0.00	0.27	0.00	0.27	0.21	0.00	0.20
Avail Cap(c_a), veh/h	765	0	0	719	0	0	1469	0	1254	1116	0	1294
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.7	0.0	0.0	32.2	0.0	0.0	2.7	0.0	2.7	2.4	0.0	2.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.9	0.0	0.0	0.4	0.0	0.5	0.4	0.0	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	0.6	0.0	0.0	2.9	0.0	0.0	1.2	0.0	1.1	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	0.0	0.0	34.1	0.0	0.0	3.1	0.0	3.2	2.9	0.0	2.9
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		39			156			735			495	
Approach Delay, s/veh		29.9			34.1			3.2			2.9	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		14.1		63.0		14.1				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		59.0		33.0		59.0		33.0				
Max Q Clear Time (g_c+I1), s		6.8		3.5		5.3		9.4				
Green Ext Time (p_c), s		5.5		0.2		3.7		0.9				

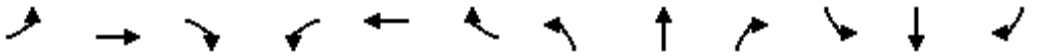
Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	291	84	145	444	119	69	257	75	83	300	82
Future Volume (veh/h)	52	291	84	145	444	119	69	257	75	83	300	82
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	63	355	102	177	541	145	84	313	91	101	366	100
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	763	647	342	1132	302	473	1340	383	507	1359	367
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	756	1870	1585	934	2774	740	927	2727	780	981	2766	746
Grp Volume(v), veh/h	63	355	102	177	346	340	84	202	202	101	233	233
Grp Sat Flow(s),veh/h/ln	756	1870	1585	934	1777	1737	927	1777	1730	981	1777	1736
Q Serve(g_s), s	5.3	11.0	3.2	13.6	11.4	11.4	4.6	5.2	5.3	5.2	6.1	6.2
Cycle Q Clear(g_c), s	16.8	11.0	3.2	24.6	11.4	11.4	10.9	5.2	5.3	10.6	6.1	6.2
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.45	1.00		0.43
Lane Grp Cap(c), veh/h	290	763	647	342	725	709	473	873	850	507	873	853
V/C Ratio(X)	0.22	0.47	0.16	0.52	0.48	0.48	0.18	0.23	0.24	0.20	0.27	0.27
Avail Cap(c_a), veh/h	486	1249	1058	585	1186	1160	473	873	850	507	873	853
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	23.5	17.2	14.9	26.1	17.3	17.3	15.1	11.6	11.6	14.7	11.8	11.9
Incr Delay (d2), s/veh	0.4	0.4	0.1	1.2	0.5	0.5	0.8	0.6	0.7	0.9	0.8	0.8
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	0.9	4.5	1.1	3.0	4.5	4.4	1.0	2.0	2.1	1.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	17.6	15.0	27.4	17.8	17.8	15.9	12.2	12.3	15.6	12.6	12.7
LnGrp LOS	C	B	B	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		520			863			488			567	
Approach Delay, s/veh		17.9			19.7			12.9			13.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.0		36.4		43.0		36.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0				
Max Q Clear Time (g_c+I1), s		12.9		18.8		12.6		26.6				
Green Ext Time (p_c), s		3.0		3.2		3.5		5.8				

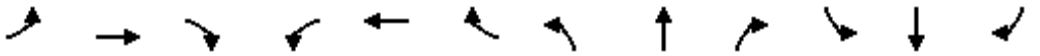
Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	54	56	40	47	146	30	1059	89	141	584	38
Future Volume (veh/h)	123	54	56	40	47	146	30	1059	89	141	584	38
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	132	58	60	43	51	157	32	1139	96	152	628	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	87	72	201	215	376	45	2608	220	235	1984	129
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.03	0.54	0.54	0.07	0.59	0.59
Sat Flow, veh/h	592	368	303	567	908	1585	1781	4798	404	3456	3387	221
Grp Volume(v), veh/h	250	0	0	94	0	157	32	808	427	152	329	340
Grp Sat Flow(s),veh/h/ln	1264	0	0	1475	0	1585	1781	1702	1798	1728	1777	1831
Q Serve(g_s), s	11.8	0.0	0.0	0.0	0.0	6.6	1.4	11.2	11.3	3.4	7.4	7.5
Cycle Q Clear(g_c), s	15.3	0.0	0.0	3.5	0.0	6.6	1.4	11.2	11.3	3.4	7.4	7.5
Prop In Lane	0.53		0.24	0.46		1.00	1.00		0.22	1.00		0.12
Lane Grp Cap(c), veh/h	369	0	0	416	0	376	45	1850	977	235	1041	1072
V/C Ratio(X)	0.68	0.00	0.00	0.23	0.00	0.42	0.70	0.44	0.44	0.65	0.32	0.32
Avail Cap(c_a), veh/h	652	0	0	732	0	701	180	1850	977	437	1041	1072
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	0.0	24.3	0.0	25.6	38.2	10.8	10.8	36.0	8.3	8.3
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.3	0.0	0.7	17.9	0.8	1.4	3.0	0.8	0.8
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	4.6	0.0	0.0	1.4	0.0	2.5	0.8	4.0	4.4	1.5	2.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	0.0	24.6	0.0	26.3	56.1	11.6	12.2	38.9	9.1	9.1
LnGrp LOS	C	A	A	C	A	C	E	B	B	D	A	A
Approach Vol, veh/h		250			251			1267			821	
Approach Delay, s/veh		31.6			25.7			12.9			14.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	47.0		22.7	6.0	50.3		22.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	10.0	43.0		35.0	8.0	45.0		35.0				
Max Q Clear Time (g_c+I1), s	5.4	13.3		17.3	3.4	9.5		8.6				
Green Ext Time (p_c), s	0.2	10.2		1.5	0.0	4.7		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.5									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	318	196	97	155	144	79	767	85	84	520	48
Future Volume (veh/h)	315	318	196	97	155	144	79	767	85	84	520	48
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	358	361	223	110	176	164	90	872	97	95	591	55
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	461	928	786	386	442	412	305	1498	668	209	1386	129
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1040	1870	1585	831	891	830	785	3554	1585	580	3287	305
Grp Volume(v), veh/h	358	361	223	110	0	340	90	872	97	95	319	327
Grp Sat Flow(s),veh/h/ln	1040	1870	1585	831	0	1721	785	1777	1585	580	1777	1815
Q Serve(g_s), s	32.0	11.7	8.0	9.3	0.0	12.1	8.9	18.3	3.7	14.6	12.3	12.4
Cycle Q Clear(g_c), s	44.1	11.7	8.0	21.0	0.0	12.1	21.3	18.3	3.7	32.9	12.3	12.4
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	461	928	786	386	0	854	305	1498	668	209	749	765
V/C Ratio(X)	0.78	0.39	0.28	0.28	0.00	0.40	0.30	0.58	0.15	0.45	0.43	0.43
Avail Cap(c_a), veh/h	491	981	831	410	0	902	305	1498	668	209	749	765
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	15.3	14.4	21.8	0.0	15.4	27.3	21.6	17.3	34.2	19.8	19.8
Incr Delay (d2), s/veh	7.3	0.3	0.2	0.4	0.0	0.3	2.5	1.7	0.5	6.9	1.8	1.7
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	8.6	4.9	2.8	1.8	0.0	4.6	1.9	7.7	1.4	2.4	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	15.6	14.6	22.2	0.0	15.7	29.8	23.2	17.8	41.1	21.6	21.6
LnGrp LOS	D	B	B	C	A	B	C	C	B	D	C	C
Approach Vol, veh/h		942			450			1059			741	
Approach Delay, s/veh		23.3			17.3			23.3			24.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		45.0		52.3		45.0		52.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		41.0		51.0		41.0		51.0				
Max Q Clear Time (g_c+I1), s		23.3		46.1		34.9		23.0				
Green Ext Time (p_c), s		6.8		2.2		2.5		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			22.6									
HCM 6th LOS			C									

APPENDIX C – OPENING YEAR 2023 TRAFFIC VOLUMES

2023 Without Project AM Peak Hour Volumes

Annual Growth: 0.5% <--- from SCAG model
2021 Base year
2023 Opening year

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Compton Avenue / 118th Street	9	508	91	60	572	5	41	62	38	64	18	52
2	Compton / 120th Street	112	314	90	137	327	122	129	494	93	93	488	170
3	Wilmington Avenue / 118th Street	137	895	64	98	997	174	63	19	85	21	41	60
4	Wilmington Avenue / 120th Street	37	757	149	118	658	333	152	158	116	69	327	195

2023 Without Project PM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Compton Avenue / 118th Street	7	509	52	47	332	7	9	14	7	47	15	49
2	Compton / 120th Street	69	257	75	83	299	74	48	291	84	145	444	119
3	Wilmington Avenue / 118th Street	29	1,059	89	141	584	35	116	54	54	40	47	146
4	Wilmington Avenue / 120th Street	79	766	85	84	518	48	315	318	196	97	155	144

2023 With Project AM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Compton Avenue / 118th Street	9	508	102	61	572	5	41	62	38	67	18	52
2	Compton / 120th Street	112	315	90	137	327	124	139	494	93	93	488	170
3	Wilmington Avenue / 118th Street	139	895	64	98	997	182	65	19	86	21	41	60
4	Wilmington Avenue / 120th Street	37	759	149	118	659	333	152	158	116	69	327	195

2023 With Project PM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Compton Avenue / 118th Street	7	509	57	47	332	7	9	14	7	57	15	50
2	Compton / 120th Street	69	257	75	83	300	82	52	291	84	145	444	119
3	Wilmington Avenue / 118th Street	30	1,059	89	141	584	38	123	54	56	40	47	146
4	Wilmington Avenue / 120th Street	79	767	85	84	520	48	315	318	196	97	155	144

PROJECT NO. 2021-002060-(2) / ENV NO. RPPL2022002289						
#	**Environmental Factor**	**Mitigation**	**Action Required**	**When Monitoring to Occur**	**Responsible Agency or Party**	**Monitoring Agency or Party**
HM-1	Hazards & Hazardous Materials	The applicant shall prepare and complete a Soil Management Plan prior to initiating soil disturbance and removal activities. To be protective of worker health and safety and potential public exposures to VOC vapors, the Soil Management Plan shall include soil vapor monitoring, including methane monitoring, during soil disturbance activities. The measures contained within the Soil Management Plan shall be implemented during all activities that involve soil disturbance. The Soil Management Plan shall be submitted to the Los Angeles County Fire Department Health Hazardous Materials Division (HHMD) for review and approval during the building permit application phase. The applicant shall also incorporate any necessary features to meet applicable standards, to the satisfaction of HHMD. HHMD shall oversee the implementation of the Soil Management Plan at the project site.	Submittal of Soil Management Plan.	Prior to initiating soil disturbance and/or removal.	Owner/applicant	Los Angeles County Fire Department Health Hazardous Materials Division (HHMD)
HW-1	Hydrology & Water Quality	The applicant shall implement stormwater quality control measures that are consistent with the County's LID standards (County of Los Angeles Code of Ordinance Title 12, Chapter 12.84) to reduce stormwater runoff. The measures shall be reviewed and approved by the Los Angeles County Public Works Department during the building permit application phase.	Submittal of LID measures.	Prior to issuance of building permit.	Owner/applicant	Los Angeles County Department of Public Works (DPW)
HW-2	Hydrology & Water Quality	The applicant shall prepare a hydrology study to show that the proposed development will not increase stormwater runoff from existing conditions. The hydrology study shall be submitted to the Los Angeles County Public Works Department for review and approval during the building permit application phase.	Submittal of Hydrology Study.	Prior to issuance of building permit.	Owner/applicant	Los Angeles County Department of Public Works (DPW)