

**Exhibit D:**  
**Environmental Documents**

COUNTY CLERK'S USE

## CITY OF LOS ANGELES

OFFICE OF THE CITY CLERK

200 NORTH SPRING STREET, ROOM 395

LOS ANGELES, CALIFORNIA 90012

## CALIFORNIA ENVIRONMENTAL QUALITY ACT

## NOTICE OF EXEMPTION

(PRC Section 21152; CEQA Guidelines Section 15062)

Pursuant to Public Resources Code § 21152(b) and CEQA Guidelines § 15062, the notice should be posted with the County Clerk by mailing the form and posting fee payment to the following address: Los Angeles County Clerk/Recorder, Environmental Notices, P.O. Box 1208, Norwalk, CA 90650. Pursuant to Public Resources Code § 21167 (d), the posting of this notice starts a 35-day statute of limitations on court challenges to reliance on an exemption for the project. Failure to file this notice as provided above, results in the statute of limitations being extended to 180 days.

## PARENT CASE NUMBER(S) / REQUESTED ENTITLEMENTS

**DIR-2022-7885-SPR-HCA** / Transit Oriented Communities & Site Plan Review

## LEAD CITY AGENCY

**City of Los Angeles (Department of City Planning)**

## CASE NUMBER

ENV-2022-7886-CE

## PROJECT TITLE

**Arapahoe Apartments**

## COUNCIL DISTRICT

1 – Eunisses Hernandez

## PROJECT LOCATION (Street Address and Cross Streets and/or Attached Map)

**957-967 South Arapahoe Street**☐ Map attached.

## PROJECT DESCRIPTION:

The demolition of a two-story single-family dwelling and a two-story 4-unit apartment building, and the construction, use, and maintenance of a new five-story residential building, 60 feet in height, containing a total of 109 dwelling units with 15 units reserved for Very Low Income Households, and one (1) dwelling unit reserved for Extremely Low Income Households. The proposed development will contain approximately 66,040 square feet of floor area, equating to a total floor area ratio (FAR) of approximately 3.46:1. The project will provide a total of 11,150 square feet of open space comprised of private balconies, a fitness center, courtyard, multipurpose room, and roof decks. The project will have one (1) subterranean level that will contain a total of 57 vehicle parking stalls, will provide a total of 88 bicycle parking stalls.

☐ Additional page(s) attached.

## NAME OF APPLICANT / OWNER:

**Shahram Shamsian, EL Investment, LLC**

## CONTACT PERSON (If different from Applicant/Owner above)

**Behrouz Bozorgnia, Mobbil, Inc.**

## (AREA CODE) TELEPHONE NUMBER

(310) 909-6235

## EXT.

EXEMPT STATUS: (Check all boxes, and include all exemptions, that apply and provide relevant citations.)

## STATE CEQA STATUTE &amp; GUIDELINES

☐ STATUTORY EXEMPTION(S)

Public Resources Code Section(s) \_\_\_\_\_

☒ CATEGORICAL EXEMPTION(S) (State CEQA Guidelines Sec. 15301-15333 / Class 1-Class 33)CEQA Guideline Section(s) / Class(es) 32☐ OTHER BASIS FOR EXEMPTION (E.g., CEQA Guidelines Section 15061(b)(3) or (b)(4) or Section 15378(b) )

## JUSTIFICATION FOR PROJECT EXEMPTION:

☐ Additional page(s) attached

In-fill development meeting the conditions described in this section. (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations. (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses. (c) The project site has no value as habitat for endangered, rare or threatened species. (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality. (e) The site can be adequately served by all required utilities and public services.

☒ None of the exceptions in CEQA Guidelines Section 15300.2 to the categorical exemption(s) apply to the Project.☐ The project is identified in one or more of the list of activities in the City of Los Angeles CEQA Guidelines as cited in the justification.

IF FILED BY APPLICANT, ATTACH CERTIFIED DOCUMENT ISSUED BY THE CITY PLANNING DEPARTMENT STATING THAT THE DEPARTMENT HAS FOUND THE PROJECT TO BE EXEMPT.

If different from the applicant, the identity of the person undertaking the project.

## CITY STAFF USE ONLY:

## CITY STAFF NAME AND SIGNATURE

Trevor Martin

*Trevor Martin*

## STAFF TITLE

City Planning Associate

## ENTITLEMENTS APPROVED

Transit Oriented Communities / Site Plan Review



CITY OF LOS ANGELES

DEPARTMENT OF CITY PLANNING

CITY HALL • 200 NORTH SPRING STREET • LOS ANGELES, CA 90012

## Categorical Exemption

### Arapahoe Apartments

**Environmental Case Number: ENV-2022-7886-CE**

**Project Location:** 957-967 South Arapahoe Street

**Community Plan Area:** Wilshire

**Council District:** 1 – Eunisses Hernandez

**Project Description:** The demolition of a two-story single-family dwelling and a two-story 4-unit apartment building, and the construction, use, and maintenance of a new five-story residential building, 60 feet in height, containing a total of 109 dwelling units with 15 units reserved for Very Low Income Households, and one (1) dwelling unit reserved for Extremely Low Income Households. The proposed development will contain approximately 66,040 square feet of floor area, equating to a total floor area ratio (FAR) of approximately 3.46:1. The project will provide a total of 11,150 square feet of open space comprised of private balconies, a fitness center, courtyard, multipurpose room, and roof decks. The project will have one (1) subterranean level that will contain a total of 57 vehicle parking stalls. The project will provide a total of 88 bicycle parking stalls including, 80 long-term, and eight (8) short-term parking stalls. The project involves the grading and export of approximately 11,500 cubic yards of soil from the site.

In order to facilitate the development of the proposed project, the applicant is requesting the following discretionary actions:

1. Pursuant to the Transit Oriented Communities Affordable Housing Incentive Program Guidelines (TOC Guidelines), the Tier 3 project is eligible for Base Incentives and up to three (3) Additional Incentives. The project, however, is not seeking Additional Incentives. As Base Incentives, the project is eligible to (1) increase the maximum allowable number of dwelling units permitted by 70 percent, (2) increase the maximum allowable FAR by 50 percent or to 3.75:1 if the maximum percentage increase results in a FAR of less than 3.75:1 for a project in a commercial zone, and (3) provide a minimum of zero (0) parking spaces;
2. Pursuant to LAMC Section 16.05, Site Plan Review for the construction of a new residential development resulting in a net increase of 50 or more dwelling units; and
3. Any additional actions as deemed necessary or desirable, including but not limited to demolition, grading, foundation, street closure(s), tree removal, haul route, and building permits.

**PREPARED BY:**

The City of Los Angeles  
Department of City Planning

**APPLICANT:**

Shahram Shamsian,  
EL Investment, LLC

**May 2023**



## **Project Background**

The project site is a level, rectangular-shaped parcel of land comprised of three (3) contiguous lots, encompassing 25,658 square feet (approximately 0.59 acres) of lot area. The subject property has 180 feet of street frontage along the west side of Arapahoe Street. The subject property is zoned R4-1 and is located within the Wilshire Community Plan Area. The Community Plan Area Map designates the subject property for High Medium Residential land uses, corresponding to the R4 Zone.

The project site is located within a Transit Priority Area in the City of Los Angeles (ZI-2452), a Los Angeles State Enterprise Zone (ZI-2374), a Tier 3 Transit Oriented Communities area, and an Urban Agriculture Incentive Zone. The project site is subject to a 20-foot Building Line along the westerly side of Arapahoe Street established under Ordinance No. 93218. The property is not located within the boundaries of or subject to any specific plan, community design overlay, or interim control ordinance.

Based upon the existing mobility and circulation networks near the proposed project, the creation of 104 net new units at the subject site will not result in significant traffic impacts in the community. The Los Angeles Department of Transportation (LADOT) Transportation Assessment Letter dated September 12, 2022, concluded that implementation of the proposed project would not result in a significant Household or Work VMT impact. Therefore, the project is not expected to result in any significant impact relating to traffic.

The project site does not fall within a Methane Hazard Site, an Alquist-Priolo Fault Zone, a Preliminary Fault Rupture Study Area, Flood Zone, Landslide Area, Liquefaction Area, Tsunami Inundation Zone, a Very High Fire Hazard Severity Zone, Hillside Area, or BOE Special Grading Area. The project site is located within the Puente Hills Blind Thrust fault zone. The project involves the grading and export of approximately 11,500 cubic yards of soil from the site.

The subject property currently consists of a vacant lot, a two-story single-family dwelling, and a two-story 4-unit apartment building. The Los Angeles Department of Building and Safety (LADBS) database indicates that a Demolition Permit was issued for 957 South Arapahoe Street on January 7, 2019 (Permit No. 19019-20000-00054) and that the Owner has applied for a Building Permit (Application No. 22010-10000-00745), which has not been issued. The Los Angeles Housing Department (LAHD) SB 8 Replacement Unit Determination (RUD) Letter dated June 23, 2022, determined that two (2) units need to be replaced with equivalent type, with one (1) units restricted to Very Low Income Households, and one (1) restricted to Extremely Low Income Households. The project proposes a total of 109 dwelling units with 15 units reserved for Very Low Income Households, and one (1) dwelling unit reserved for Extremely Low Income Households.

A Tree Report dated August 27, 2021, prepared by The Tree Resource, identified a total of 11 trees on the project site, six (6) of which are street trees located in the public right-of-way along the westerly side of Arapahoe Street. None of the total 11 trees surveyed have been identified as protected tree species as defined under LA City Ordinance No. 177,404.

Properties within the vicinity of the project site are zoned R4-1 and are designated for High Medium Residential land uses. The surrounding properties are developed with single- and multi-family residential buildings ranging from two to six stories in height. Adjoining the project site to the north is a two-story apartment building. Abutting the subject site to the east, are properties developed with a surface parking lot, and a two-story single-family dwelling. Adjoining the project site to the south, is a three-story apartment building. Properties adjoining the subject site to the west are developed with three-story apartment buildings.

The proposed project would not have a significant effect on the environment. A “significant effect on the environment” is defined as “a substantial, or potentially substantial, adverse change in the environment” (CEQA Guidelines, Public Resources Code Section 21068). The proposed project and potential impacts were analyzed in accordance with the California Environmental Quality Act (CEQA) Guidelines, which establish guidelines and thresholds of significant impact, and provide the methods for determining whether or not the impacts of a proposed project reach or exceed those thresholds. Analysis of the proposed project has been determined that it is Categorically Exempt from environmental review pursuant to Article 19, Section 15332 of the CEQA Guidelines (Class 32) and there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies. On May 24, 2023, the subject project was issued a Notice of Exemption for a Class 32 Categorical Exemption.

### CLASS 32 CATEGORICAL EXEMPTION

The proposed project qualifies for a Class 32 Categorical Exemption because it conforms to the definition of “In-fill Projects.” A project qualifies for a Class 32 Categorical Exemption if it is developed on an infill site and meets the following five applicable conditions: (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations; (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses; (c) The project site has no value as habitat for endangered, rare or threatened species; (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and (e) The site can be adequately served by all required utilities and public services.

As previously stated, the project involves the demolition of a two-story single-family dwelling and a two-story 4-unit apartment building, and the construction, use, and maintenance of a new five-story residential building, 60 feet in height, containing a total of 109 dwelling units with 15 units reserved for Very Low Income Households, and one (1) dwelling unit reserved for Extremely Low Income Households. Roof and site drainage as well as sewer availability are required to comply with Bureau of Engineering and Bureau of Sanitation standards, Hydrants, Fire Department Access, and Fire Safety also require review and approval by the Los Angeles Fire Department before permits can be issued. Furthermore, the project must comply with all City Regulatory Compliance Measures (RCMs) that apply.

As a new residential building developed on an infill site, this project qualifies for the Categorical Exemption. The project can be characterized as infill development within urban areas for the purpose of qualifying for Class 32 Categorical Exemption as a result of meeting the five conditions listed below.

- (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.**

The subject property is located within the Wilshire Community Plan area which is one of the 35 Community Plans that make up the Land Use Element of the General Plan. The Wilshire Community Plan Area Map designates the subject property for High Medium Residential land uses corresponding to the R4 Zone. The subject property's R4 zoning is thus consistent with the General Plan's land use designation for the site. The property is not located within the boundaries of or subject to any specific plan, community design overlay, or interim control ordinance.

The proposed project is consistent with, and meets the goals, objectives, and policies of the Wilshire Community Plan. The proposed residential development will result in a net increase of 104 dwelling units on the subject property, adding new desirable multi-family housing to the region and contribute to the City's affordable housing stock. The project meets the intent of the following goals, objectives, and policies of the Wilshire Community Plan:

**Goal 1:** Provide a safe, secure, and high quality residential environment for all economic, age, and ethnic segments of the Wilshire community.

**Objective 1-1:** Provide for the preservation of existing quality housing, and for the development of new housing to meet the diverse economic and physical needs of the existing residents and expected new residents in the Wilshire Community Plan Area to the year 2010.

**Policy 1-1.3:** Provide for adequate Multiple Family residential development.

**Objective 1-2:** Reduce vehicular trips and congestion by developing new housing in close proximity to regional and community commercial centers, subway stations and existing bus route stops.

**Policy 1-2.1:** Encourage higher density residential uses near major public transportation centers.

**Objective 1-4:** Provide affordable housing and increased accessibility to more population segments, especially students, the handicapped and senior citizens.

**Policy 1-4.1:** Promote greater individual choice in type, quality, price and location of housing.

In addition, the project meets the following objectives and policies of the City's Housing Element:

**Objective 1.1:** Produce an adequate supply of rental and ownership housing in order to meet current and projected needs.

**Policy 1-1.4:** Expand opportunities for residential development, particularly in designated Centers, Transit Oriented Districts and along Mixed-Use Boulevards.

**Objective 2.2:** Promote sustainable neighborhoods that have mixed-income housing, jobs, amenities, services, and transit.

**Policy 2-2.2:** Provide incentives and flexibility to generate new multi-family housing near transit and centers, in

accordance with the General Plan Framework element, as reflected in Map ES.1.

The project makes a both practical and efficient use of the subject property by locating new, higher density residential development near transit lines and neighborhood services. The resulting development will thus be located in a manner that has the potential to reduce vehicular trips. The project will also provide a mix of market rate and affordable units, thereby promoting the provision of adequate housing for all persons relative to income. The project meets all applicable design guidelines and standards, and is a residential development with an appropriate, context-sensitive scale. The project will be conditioned and designed to contribute towards a pedestrian-friendly environment that is safe for all modes of transportation. Furthermore, the project is located within one-half mile of the Metro Route 28 and Metro Local 603 bus lines. The provision of well-designed multi-family housing, which includes restricted affordable units, ensures a project that will complement the existing neighborhood while also providing valuable housing stock to current and future residents. Therefore, the proposed project is consistent with the General Plan policies and zoning regulations within the City of Los Angeles.

**(b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.**

The subject property is located wholly within the Wilshire Community Plan Area within the City of Los Angeles. The project site is a level, rectangular-shaped parcel of land comprised of three (3) contiguous lots, encompassing 25,658 square feet (approximately 0.59 acres) of lot area. The project site is substantially surrounded by urban uses and is not located near any areas designated for farmland or agricultural uses. The neighborhood is fully built-out with residential uses that are consistent with their General Plan land use designations and zoning.

**(c) The project site has no value as habitat for endangered, rare or threatened species:**

The project site is a level, rectangular-shaped parcel of land comprised of three (3) contiguous lots, encompassing 25,658 square feet (approximately 0.59 acres) of lot area. The subject property currently consists of a vacant lot, a two-story single-family dwelling, and a two-story, 4-unit apartment building.

A Tree Report dated August 27, 2021, prepared by The Tree Resource, identified a total of 11 trees on the project site, six (6) of which are street trees located in the public right-of-way along the westerly side of Arapahoe Street. None of the total 11 trees surveyed have been identified as protected tree species as defined under LA City Ordinance No. 177,404, nor are they a habitat for any endangered, rare, or threatened species. Any removal and replacement of street trees would be conducted in accordance with Bureau of Street Services, Urban Forestry Division. Furthermore, the project site is in a long-established urban neighborhood which is fully built out with residential development. The project site, therefore, has no value as habitat for endangered species, rare, or threatened species.

**(d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality:**

**Traffic.** A significant impact may occur if the project conflicts with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the

circulation system. On July 30, 2019, pursuant to SB 743 and the recent changes to Section 15064.3 of the State's CEQA Guidelines, the City of Los Angeles adopted vehicle miles traveled (VMT) as a criteria in determining transportation impacts under CEQA. The new Los Angeles Department of Transportation (LADOT), Transportation Assessment Guidelines (TAG) provide instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds. LADOT has established that any project resulting in a net increase of 250 or more daily vehicle trips requires a VMT analysis.

The proposed project involves the demolition of a two-story single-family dwelling and a two-story 4-unit apartment building, and the construction, use, and maintenance of a new five-story residential building, 60 feet in height, containing a total of 109 dwelling units with 15 units reserved for Very Low Income Households, and one (1) dwelling unit reserved for Extremely Low Income Households. The project will have one (1) subterranean level that will contain a total of 57 vehicle parking stalls.

A Traffic Assessment Report dated June 30, 2022 was prepared by Linscott, Law & Greenspan, Engineers (LLG), in order to determine whether or not the proposed project would result in any significant effects relating to traffic. The Traffic Study found that the project would generate a net increase of 422 daily vehicle trips and a net increase of 2,648 daily vehicle miles traveled (VMT), thus requiring the proposed project to conduct a vehicle miles traveled (VMT) analysis.

The LADOT VMT Calculator tool measures project impact in terms of Household VMT per Capita, and Work VMT per Employee. DOT identified distinct thresholds for significant VMT impacts for each of the seven Area Planning Commission (APC) areas in the City. For the Central Los Angeles APC area, in which the project is located, the following thresholds have been established:

- Household VMT per Capita: 6.0
- Work VMT per Employee: 7.6

As cited in the VMT Analysis report, prepared by Linscott, Law & Greenspan, Engineers (LLG), the proposed project is projected to have a Household VMT per capita of 5.5 and a Work VMT per employee of 0. Subsequently, LADOT completed its Transportation Impact Assessment and in a letter dated September 12, 2022, concluded that implementation of the proposed project would not result in a significant Household or Work VMT impact. Therefore, the project is not expected to result in any significant impact relating to traffic.

**Noise.** The project must comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574 and any subsequent ordinances which prohibit the emission or creation of noise beyond certain levels. The Ordinances cover both operational noise levels (i.e. post-construction), as well as any noise impact during construction. Section 41.40 of the LAMC regulates noise from demolition and construction activities and prohibits construction activity (including demolition) and repair work, where the use of any power tool, device, or equipment would disturb persons occupying sleeping quarters in any dwelling hotel, apartment, or other place of residence, between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, and between 6:00 p.m. and 8:00 a.m. on Saturdays and holidays; all such activities are also prohibited on Sundays. Section 112.05 of the LAMC also specifies the maximum noise level of construction machinery that can be generated in any

residential zone of the city or within 500 feet thereof. As the project is required to comply with the above ordinances and regulations, it will not result in any significant noise impacts. All construction-related noise impacts would be less than significant and temporary in nature.

A Noise Technical Report dated April 26, 2023, prepared by Yorke Engineering, LLC and attached to the subject environmental case file, concluded that no significant permanent operational or cumulative noise impacts are expected as a result of the proposed project (the Noise Study provides the full analysis). Given that the project would be required to comply with all existing and applicable noise regulations, the study concluded that the project would not result in any significant impacts and that no mitigation measures are necessary. Although noise arising from construction is unavoidable, the noise would be temporary and limited to the duration of the construction in any one location. The report states that standard, industry-wide best practices for construction in urban or otherwise noise-sensitive areas would ensure that construction noise does not exceed the noise limit imposed by LAMC Section 112.05. These could include erecting temporary noise barriers around the project's perimeter, using mufflers to dampen noise from internal combustion engines, and warming-up or staging equipment away from sensitive receptors. Complete elimination of construction activity noise is technically infeasible; however, incorporation of the best available noise reduction methods will minimize impacts on the residential uses bordering the project site. Compliance with the various local regulatory measure will further minimize any adverse construction noise impact potential.

As the project is a residential development, the project is not expected to generate significant permanent operational noise impacts. Noise generated at outdoor recreational spaces such as balconies and patios would not exceed the recommended noise compatibility guidelines. Any new stationary sources of noise, such mechanical HVAC equipment, installed on the proposed development will be required to comply with LAMC Sections 112.02 and 112.05 which prohibit noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties by more than five dBA. As such, the proposed project is expected to generate a negligible increase in ambient noise from operation.

Through compliance with all existing regulations governing both construction and operational noise, any noise impacts resulting from the project will be less than significant.

**Air Quality.** The South Coast Air Quality Management District (SCAQMD) is the agency primarily responsible for comprehensive air pollution control in the South Coast Air Basin and reducing emissions from area and point stationary, mobile, and indirect sources. The 2016 Air Quality Management Plan (AQMP) was prepared by SCAQMD and adopted in April 2017 to meet federal and state ambient air quality standards. A significant air quality impact may occur if a project is inconsistent with the AQMP or would in some way represent a substantial hindrance to employing the policies or obtaining the goals of that plan. The project is not expected to conflict with, or obstruct, the implementation of the AQMP and SCAQMD rules. The project is consistent with current zoning regulations and policies within the City of Los Angeles, allowing for the proposed development on the subject site. The project would also comply with the 2020 Los Angeles Green Building Code (LAGBC), which builds upon and sets higher standards than those in the 2022 California Green Building Standards Code (CalGreen, effective January 1, 2023). Additionally, the project's infill location would promote the concentration of development in a long-established urban neighborhood with extensive infrastructure and access to public transit facilities, thus reducing the vehicle miles traveled for residents, and visitors. Therefore, project impacts related to air quality will be less than significant.

During construction, appropriate dust control measures would be implemented as part of the proposed project during each phase of development, as required by SCAQMD Rule 403 - Fugitive Dust. Specifically, Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas.

Best Management Practices (BMP) will be implemented that would include (but not be limited to) the following:

- Unpaved demolition and construction areas shall be wetted at least three times daily during excavation and construction, and temporary dust covers shall be used to reduce emissions and meets SCAQMD Rule 403;
- All dirt/soil loads shall be secured by trimming, watering or other appropriate means to prevent spillage and dust;
- General contractors shall maintain and operate construction equipment to minimize exhaust emissions; and
- Trucks shall not idle but be turned off.

By implementing BMPs, all construction-related impacts will be less than significant and temporary in nature. No permanent significant impacts are anticipated to occur from construction.

Furthermore, an Air Quality Technical Report was prepared by York Engineering, LLC in April 2023, which is included in the subject case file. The study quantifies the estimated daily construction and operational emissions for various pollutants from the project site using CalEEMod simulations. Based on the simulation results, none of the construction and operational emissions are expected to exceed the South Coast Air Quality Management District (SCAQMD) air quality significance thresholds. Furthermore, the report finds that the project is consistent with all applicable aspects of the City's General Plan Air Quality Element. The study does not recommend any mitigation measures as all construction and operational emissions are expected to be below the thresholds considered by SCAQMD to be significant under CEQA guidelines. Potential impacts related to air quality from the project will therefore be less than significant.

**Water Quality.** With regard to water quality, a significant impact would occur if the project would: 1) exceed wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board (LARWQCB); 2) increase water consumption or wastewater generation to such a degree that the capacity of facilities currently serving the project site would be exceeded; or 3) increase surface water runoff, resulting in the need for expanded off-site storm water drainage facilities. All wastewater from the project would be treated according to requirements of the National Pollutant Discharge Elimination System (NPDES) permit authorized by the LARWQCB. Therefore, the proposed project would result in a less than significant impact related to wastewater treatment requirements.

Additionally, prior to any construction activities, the project applicant would be required to coordinate with the City of Los Angeles Bureau of Sanitation (BOS) to determine the exact wastewater conveyance requirements of the proposed project, and any upgrades to the wastewater lines in the vicinity of the project site that are needed to adequately serve the proposed project would be undertaken as part of the project. Therefore, the proposed project would not result in a significant impact related to water or wastewater infrastructure.

Lastly, development of the proposed project would maintain existing drainage patterns; site generated surface water runoff would continue to flow to the City's storm drain system. The proposed project would not create or contribute runoff water that would exacerbate any existing deficiencies in the storm drain system or provide substantial additional sources of polluted runoff. Therefore, the proposed project would not result in a significant impact related to existing storm drain capacities.

**(e) The site can be adequately served by all required utilities and public services:**

The site is currently and adequately served by the City's Department of Water and Power, the City's Bureau of Sanitation, the Southern California (SoCal) Gas Company, the Los Angeles Police Department, the Los Angeles Fire Department, Los Angeles Unified School District, Los Angeles Public Library, and other public services. These utilities and public services have continuously served the area for the past several decades. In addition, the California Green Code requires new construction to meet stringent efficiency standards for both water and power, such as high-efficiency toilets, dual-flush water closets, minimum irrigation standards, LED lighting, etc. As a result of these new building codes, which are required of all projects, it can be anticipated that the proposed project will not create any substantial impact on existing utilities and public services through the net addition of 104 dwelling units at the subject site.

In addition, roof and site drainage as well as sewer availability must comply with Bureau of Engineering and Bureau of Sanitation standards; and hydrants, Fire Department Access, and Fire Safety must be reviewed and approved by the Los Angeles Fire Department before permits can be issued. Furthermore, the project must comply with all City Regulatory Compliance Measures (RCMs) that apply. Therefore, the proposed project can be adequately served by all required utilities and public services.

### EXCEPTIONS TO CATEGORICAL EXEMPTIONS

The City has further considered whether the proposed project is subject to any of the six exceptions set forth in State CEQA Guidelines Section 15300.2 that would prohibit the use of any categorical exemption. Planning staff has determined that none of the exceptions apply to the proposed project, as described below.

**(a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.**

As the proposed project is not defined as a Class 3, 4, 5, 6 or 11 project, this exception is non-applicable. The project site is in an urbanized area in the City of Los Angeles. The project site is not located in a particularly sensitive environment and is not located on a site containing wetlands, endangered species, or wildlife habitats; therefore, this exception is not applicable.



- (b) **Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.**

The proposed five-story residential development with 109 dwelling units on the project site is consistent with the zone and land uses as designated by the Wilshire Community Plan, and as permitted by the City's TOC Affordable Housing Incentive Program pursuant to LAMC 12.22-A.31. A successive project of the same type and nature would reflect a development that is consistent with the underlying land use designation and the Los Angeles Municipal Code, and thus would be subject to the same regulations and requirements, including development standards and environmental impacts. The impacts of each subsequent project will be mitigated if necessary, and thus will not result in a cumulative impact.

The project would not result in a cumulatively considerable contribution to any impact. The threshold of significance for a cumulatively considerable contribution to a traffic impact is the same as the threshold of significance for a project impact. Therefore, since the project would not exceed that threshold, it would have neither a project-specific significant impact, nor the potential to result in a cumulatively considerable contribution to a significant traffic impact. The same is true for air quality thresholds of significance; the project does not have the potential to result in a project-specific significant air quality impact, and therefore, does not have the potential to result in a cumulatively considerable contribution to a significant air quality impact.

Regulatory Compliance Measures (RCMs) in the City of Los Angeles regulate impacts related to Air Quality, Construction Noise/Vibrations, Operational Noise/Vibrations, and Transportation/Traffic. Numerous Los Angeles Municipal Code Sections provide requirements for construction activities and ensure impacts from construction related noise, traffic, and parking are less than significant. The Noise Regulation Ordinance, No. 144,331, provides regulatory compliance measures related to construction noise and maximum noise levels for all activities. LAMC Section 62 provides specific regulatory compliance measures related to construction traffic and parking. LAMC Section 41 requires construction site postings listing representative contact information and permitted construction/demolition hours as established by the Department of Building and Safety. Additionally, there is insufficient evidence to conclude that significant impacts will occur based on past project approvals or in progress entitlement applications and that the proposed project will have adverse impacts on the cumulative impacts of construction noise and transportation/traffic in this area. Furthermore, there is insufficient evidence to conclude that the proposed project will be under construction at the same time as projects within the vicinity. Thus, this exception does not apply.

- (c) **Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.**

The project site is a level, rectangular-shaped parcel of land comprised of three (3) contiguous lots, encompassing 25,658 square feet (approximately 0.59 acres) of lot area. The subject property currently consists of a vacant lot, a two-story single-family dwelling, and a two-story 4-unit apartment building. The proposed project involves the demolition of the two-story single-family dwelling and the two-story 4-unit apartment building, and the construction, use, and maintenance of a new five-story residential building, 60 feet in height, containing a total of 109 dwelling units. The project will have one (1) subterranean level that will contain a total of 57 vehicle parking stalls will provide a total of 88 bicycle

parking stalls. The project consists of residential uses and operations that are compatible with the surrounding urban development and consistent with the underlying zoning.

The project site is located in an urbanized area within the City of Los Angeles and consists primarily of residential uses and operations that are compatible with the surrounding urban development and consistent with the underlying zoning. The site does not demonstrate any unusual circumstances, and the project will not generate any significant impacts regarding traffic, noise, air quality, or water quality. There are no special districts or other known circumstances that indicate a sensitive surrounding environment. Thus, there are no unusual circumstances which may lead to a significant effect on the environment.

- (d) **Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.**

Based on a review of the California Scenic Highway Mapping System, the subject site is not located along a California State Scenic Highway and will not impact any identified scenic resources, including trees, historic buildings, rock outcroppings, or other similar resources, within a highway officially designated as a State Scenic Highway. Therefore, this exception does not apply.

- (e) **Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.**

Based on a review of the California Department of Toxic Substances Control “Envirostor Database,” no known hazardous waste sites are located on the project site. Additionally, there are also no listed hazardous waste sites within the immediate vicinity of the project site. The subject property currently consists of a vacant lot, a two-story single-family dwelling, and a two-story 4-unit apartment building, residential uses that are not expected to utilize hazardous waste or materials that pose significant constraint on the project site.

Additionally, the project site is not located within a Methane Zone or Methane Buffer Zone, nor is located within a Hazardous Waste/Border Zone Properties area as designated by the City of Los Angeles. No industrial wastewater is generated on the project site and sanitary wastewater is discharged to the City Bureau of Sanitation. Therefore, this exception for a Categorical Exemption does not apply to this project.

- (f) **Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.**

The existing two-story single-family dwelling, and two-story four-unit apartment building have not been identified as historic resources by local or state agencies, and have not been determined to be eligible for listing in the National Register of Historic Places, California Register of Historical Resources, or the Los Angeles Historic-Cultural Monuments Register. In addition, the project site is not located within a Historic Preservation Overlay Zone and thus not subject to historic preservation review. For these reasons, construction of the proposed project would not constitute a substantial adverse

change in the significance of a historic resource as defined by CEQA, therefore, this exception does not apply.

## CONCLUSION

In summary, the project involves the demolition of a two-story single-family dwelling and a two-story 4-unit apartment building, and the construction, use, and maintenance of a new five-story residential building, 60 feet in height, containing a total of 109 dwelling units located on a 25,658 square-foot lot. The project will have one (1) subterranean level that will contain a total of 57 vehicle parking stalls and will provide a total of 88 bicycle parking stalls. The project is consistent with the surrounding developments (which consists of established residential uses), is permitted by the TOC Guidelines, and is entirely consistent with the existing General Plan designation, zoning, and requirements of the LAMC. The project will not generate a significant number of vehicle trips and will not result in any significant impacts to land use planning, environmental habitat, noise, air quality, or water quality. In addition, the project is located in a long-established urbanized neighborhood, and thus will be adequately served by all required public utilities and services.

Furthermore, the project is not in a particularly sensitive environment, and will not impact an environmental resource of hazardous or critical concern that is designated, precisely mapped, or officially adopted by any federal, state, or local agency. The project will not result in any significant impacts and, therefore, will not make a cumulatively considerable contribution to any significant impacts that are not already accounted for by the General Plan and future environmental clearances. The project is consistent with the surrounding developments, including established residential and commercial uses, does not present any unusual circumstances that would result in a significant impact on the environment, and would not constitute a substantial adverse change in the significance of a historic resource as defined by CEQA. Therefore, none of the possible exceptions to Categorical Exemptions, found in Section 15300.2 Exceptions, apply to this project, and as such, the project qualifies for a Class 32 Categorical Exemption.

# ARAPAHOE APARTMENTS

The proposed development is a high-density 109-unit five story apartment building on lots zoned as R4 with height district 1 and is consistent with the general plan for the community with a designation of high medium residential.

The proposed development is replacing a single-family building and a multi-family building within the city of Los Angeles in a neighborhood that is extensively developed for residential uses and the lot is less than five acres at 25,658.1 sqft.

The proposed development is on lots that have been developed in the past for residential purposes and therefore, is not a habitat for endangered, rare or threatened species.

The proposed development is on a property less than 1 acre (0.856) and is an infill development on previously developed land. The proposed development is in an urban environment with all the surrounding area developed for commercial & residential uses, therefore, the new development would not result in any significant effects relating to traffic, noise, air quality, or water quality. Also, the project is in a transit priority area as recognized by ZI-2452 and the proposed project is providing less than 1 parking space per unit, therefore, the development will not create any additional traffic or noise.

Since the project site has been previously developed for residential uses and the neighborhood is developed for residential and commercial uses, the property is well served by electricity, sewer & water.

Therefore, we strongly believe the project qualifies for class 32 infill categorical exemption per CEQA guideline section 15332.

April 26, 2023

Ms. Christina Ditchman  
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**Subject: Air Quality, Greenhouse Gas, and Noise Study for an Apartment Building Development in Los Angeles, CA; APNs 5076-005-007, -008, -009**

Dear Ms. Ditchman:

Yorke Engineering, LLC (Yorke) is pleased to provide this update Air Quality (AQ), Greenhouse Gas (GHG), and Noise Letter Report. This AQ/GHG/Noise Letter Report includes CalEEMod emissions estimates, criteria pollutant analysis, localized significance level (LST) analysis, GHG analysis, and Noise analysis for the proposed multi-residential building in the City of Los Angeles, California (City). These evaluations will support the Applicant's submittal of the Department of City Planning Environmental Assessment Form (EAF) for a CEQA §15332 Class 32 Infill Development Project with Transit Oriented Communities (TOC) Tier 3 designation.

## **PROJECT DESCRIPTION**

Mobbil is proposing to develop the 109-unit "Arapahoe Apartments" at 957-967 Arapahoe Street in the Wilshire Community Plan area of the City of Los Angeles, CA 90006 (the City), which is within the South Coast Air Quality Management District (SCAQMD, District). The proposed project will be constructed on a merged 25,658-square-foot (0.589-acre) lot comprising three Assessor's Parcel Numbers (APNs) 5076-005-007, -008, and -009 with R4-1 zoning. The five-level Type III-A building will have a total floor area of 74,121-square-feet on a 24,272-square-foot subterranean parking garage footprint. Backyard and courtyard areas will total 4,181-square-feet. A total of 59 parking spaces will be provided in the Type I-A subterranean parking garage, including three (3) Americans with Disabilities Act (ADA)-compliant spaces, 18 electrical vehicle parking/charging spaces, and four (4) compact parking spaces, for a balance of 34 standard spaces. Bicycle parking will also be provided, 80 long-term spaces and eight short-term spaces, with charging stations for electric bicycles. Approximately 11,000 square feet of existing single- and two-story structures will be demolished prior to the start of construction. Consistent with similar projects in the general area, the Los Angeles Department of City Planning (LA City Planning) has requested an Air Quality, Greenhouse Gas, and Noise Study for the proposed project.

## **ASSUMPTIONS**

The following basic assumptions were used in developing the emission estimates for the proposed project using the California Emissions Estimator Model<sup>®</sup> (CalEEMod):

- Some project design features including sizes of the building features, landscaped area, and parking area size were defined by the Applicant;

- Low water flow fixtures and water-efficient landscaping;
- Limited parking, bicycle storage, and electric vehicle and electric bicycle charging stations;
- The project traffic study (Linscott, Law & Greenspan 2022, Table 2-1 Project Trip Generation Forecast), estimated that the proposed project would be expected to generate 495 operational vehicle trips per day (i.e., 4.54 trips per dwelling unit per day), which assumed that all 109 units would have an associated vehicle. However, to account for TOC, limited parking, bicycle storage, and electric vehicle and electric bicycle charging stations, this operational trip rate is reduced by 50% (i.e., 2.27 trips per dwelling unit per day, weekdays, and weekends) in CalEEMod;
- Consistent with District Rule 403 – Fugitive Dust, during construction, exposed soil will be watered a minimum of twice daily, unpaved construction roadways will be watered, paved site access roads will be swept, and vehicle speeds on unpaved roadways will be limited as construction Best Management Practices (BMPs);
- Default construction equipment, including hours used per day were applied to construction phases of the project;
- Rule-compliant low VOC paints will be used;
- The subterranean parking garage was assumed to be enclosed with an elevator and is included in the CalEEMod modeling;
- The project is expected to require approximately 12 months of planned work activities (i.e., from initial mobilization to substantial completion) comprising six construction phases (demolition, grading, site preparation, building construction, paving, and architectural coating);
- Approximately 11,000 square feet of old buildings will be removed from the site during the demolition phase with water applied to active demolition sites;
- Consistent with TOC, the project is expected to increase transit accessibility, as it is located approximately 1,000 feet (0.2 mile) walking distance from the closest transit stations (Metro bus stops) on West Olympic Boulevard at South Hoover Street, also at Elden Avenue (further details are provided in Linscott, Law & Greenspan 2022, Table 3-1 Existing Transit Routes, and Table 5-1 Project Evaluation Pedestrian, Bicycle, and Transit Access); and
- Comparable projects are listed in Linscott, Law & Greenspan 2022, Table 3-3 Related Projects List and Trip Generation, incorporated by reference.

## LIST OF TABLES

The project analyses and results are summarized in the following tables:

- Table 1: Land Use Data for CalEEMod Input
- Table 2: SCAQMD CEQA Thresholds of Significance
- Table 3: Construction Emissions Summary and Significance Evaluation
- Table 4: Operational Emissions Summary and Significance Evaluation

- Table 5: Construction Localized Significance Threshold Evaluation
- Table 6: Operational Localized Significance Threshold Evaluation
- Table 7: Greenhouse Gas Emissions Summary and Significance Evaluation
- Table 8: Typical Sound Level Characteristics
- Table 9: FHWA Noise Reference Levels and Usage Factors
- Table 10: Estimated Peak Activity Daytime Noise Impacts – Residential Receptors

## **AIR QUALITY AND GREENHOUSE GAS IMPACTS ANALYSES**

To evaluate the potential for Air Quality and Greenhouse Gas impacts of a proposed project, quantitative significance criteria established by the local air quality agency, such as the SCAQMD, may be relied upon to make significance determinations based on mass emissions of criteria pollutants and GHGs, as presented in this report. As shown below, approval of the project would not result in any significant effects relating to air quality or greenhouse gases.

### **Project Emissions Estimation**

The construction and operation analysis were performed using the California Emissions Estimation Model<sup>®</sup> (CalEEMod), version 2022.1.1.10, the official statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with both construction and operations of land use projects under CEQA. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model – published by the California Air Resources Board (CARB) – include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and control measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from the selected measures. CalEEMod was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the SCAQMD, the Bay Area Air Quality Management District (BAAQMD), the San Joaquin Valley Air Pollution Control District (SJVAPCD), and other California air districts. Default land use data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis.

Based on information received from the Applicant, land use data used for CalEEMod input is presented in Table 1. The SCAQMD quantitative significance thresholds shown in Table 2 were used to evaluate project emissions impacts (SCAQMD 2023).

Table 1: Land Use Data for CalEEMod Input						
Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage (footprint)	Square Feet (gross)	Description
Residential	Apartments Mid Rise	109	Dwelling Units	—	74,121	Apartments & Amenities
Parking	Enclosed Parking with Elevator	24.272	1,000 sq. ft.	0.557	24,272	Subterranean Parking Garage (footprint)
Landscape	Landscape	1.386	1,000 sq. ft.	0.032	1,386	Landscaping (net)
<b>Project Site</b>				<b>0.589</b>	<b>25,658</b>	<b>Total Land Area</b>

Sources: Applicant 2023, CalEEMod version 2022.1.1.10

Notes:

Electric utility: LADWP

Gas utility: SoCalGas

Table 2: SCAQMD CEQA Thresholds of Significance		
Pollutant	Project Construction	Project Operation
ROG (VOC)	75 lbs/day	55 lbs/day
NO <sub>x</sub>	100 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
SO <sub>x</sub>	150 lbs/day	150 lbs/day
PM <sub>10</sub>	150 lbs/day	150 lbs/day
PM <sub>2.5</sub>	55 lbs/day	55 lbs/day
24-hour PM <sub>2.5</sub> Increment	10.4 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
24-hour PM <sub>10</sub> Increment	10.4 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
Annual PM <sub>10</sub> Increment	1.0 µg/m <sup>3</sup> annual average	
1-hour NO <sub>2</sub> Increment	0.18 ppm (state)	
Annual NO <sub>2</sub> Increment	0.03 ppm (state) & 0.0534 ppm (federal)	
1-hour SO <sub>2</sub> Increment	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile)	
24-hour SO <sub>2</sub> Increment	0.04 ppm (state)	
24-hour Sulfate Increment	25 ug/m <sup>3</sup> (state)	
1-hour CO Increment	20 ppm (state) & 35 ppm (federal)	
8-hour CO Increment	9.0 ppm (state/federal)	
Toxic Air Contaminants (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥10 in 1 million	
	Cancer Burden >0.5 excess cancer cases (in areas ≥1 in 1 million)	
	Chronic & Acute Hazard Index ≥1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to Rule 402	
Greenhouse Gases	10,000 MT/yr CO <sub>2</sub> e for industrial facilities	
	3,000 MT/yr CO <sub>2</sub> e for land use projects (draft proposal)	

Source: SCAQMD 2023, 2008b



### ***Criteria Pollutants from Project Construction***

A project's construction phase produces many types of emissions, generally PM<sub>10</sub> (including PM<sub>2.5</sub>) in fugitive dust and diesel engine exhaust are the pollutants of greatest concern. Construction-related emissions can cause substantial increases in localized concentrations of PM<sub>10</sub>, as well as affecting PM<sub>10</sub> compliance with ambient air quality standards on a regional basis. The use of diesel-powered construction equipment emits ozone precursors oxides of nitrogen (NO<sub>x</sub>) and reactive organic gases (ROG), and diesel particulate matter (DPM); however, the use of diesel-powered equipment would be minimal. Use of architectural coatings and other materials associated with finishing buildings may also emit ROG and toxic air contaminants (TACs). CEQA significance thresholds address the impacts of construction activity emissions on local and regional air quality. Thresholds are also provided for other potential impacts related to project construction, such as odors and TACs.

### ***Criteria Pollutants from Project Operation***

The term "project operations" refers to the full range of activities that can or may generate criteria pollutant, GHG, and TAC emissions when the project is functioning in its intended use. For projects, such as office parks, shopping centers, apartment buildings, residential subdivisions, and other indirect sources, motor vehicles traveling to and from the project represent the primary source of air pollutant emissions. For industrial projects and some commercial projects, equipment operation and manufacturing processes, i.e., permitted stationary sources, can be of greatest concern from an emissions standpoint. CEQA significance thresholds address the impacts of operational emission sources on local and regional air quality. Thresholds are also provided for other potential impacts related to project operations, such as odors.

### ***Results of Criteria Emissions Analyses***

Table 3 shows unmitigated and mitigated criteria construction emissions and evaluates mitigated emissions against SCAQMD significance thresholds.

Table 4 shows unmitigated and mitigated criteria operational emissions and evaluates mitigated emissions against SCAQMD significance thresholds.

As shown in Tables 3 and 4, mass emissions of criteria pollutants from construction and operation are below applicable SCAQMD significance thresholds.

PROJECTED IMPACT: Less Than Significant (LTS)

Table 3: Construction Emissions Summary and Significance Evaluation				
Criteria Pollutants	Unmitigated (lbs/day)	Mitigated (lbs/day)	Threshold (lbs/day)	Significance
ROG (VOC)	24.0	19.3	75	LTS
NO <sub>x</sub>	17.9	17.9	100	LTS
CO	18.6	18.6	550	LTS
SO <sub>x</sub>	0.04	0.04	150	LTS
Total PM <sub>10</sub>	7.0	3.1	150	LTS
Total PM <sub>2.5</sub>	3.5	1.6	55	LTS

Sources: SCAQMD 2023, CalEEMod version 2022.1.1.10

Notes:

lbs/day are winter or summer maxima for planned land use

Total PM<sub>10</sub> / PM<sub>2.5</sub> comprises fugitive dust plus engine exhaust

LTS - Less Than Significant

Table 4: Operational Emissions Summary and Significance Evaluation				
Criteria Pollutants	Unmitigated (lbs/day)	Mitigated (lbs/day)	Threshold (lbs/day)	Significance
ROG (VOC)	3.3	2.9	55	LTS
NO <sub>x</sub>	1.0	0.7	55	LTS
CO	14.3	10.8	550	LTS
SO <sub>x</sub>	0.02	0.01	150	LTS
Total PM <sub>10</sub>	0.59	0.31	150	LTS
Total PM <sub>2.5</sub>	0.14	0.08	55	LTS

Sources: SCAQMD 2023, CalEEMod version 2022.1.1.10

Notes:

lbs/day are winter or summer maxima for planned land use

Total PM<sub>10</sub> / PM<sub>2.5</sub> comprises fugitive dust plus engine exhaust

LTS - Less Than Significant

### ***Localized Significance Threshold Analysis***

The SCAQMD's Localized Significance Threshold (LST) methodology (2008a) was used to analyze the neighborhood scale impacts of NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> associated with project-specific mass emissions. Introduced in 2003, the LST methodology was revised in 2008 to include the PM<sub>2.5</sub> significance threshold methodology and update the LST mass rate lookup tables for the new 1-hour NO<sub>2</sub> standard.

For determining localized air quality impacts from small projects in a defined geographic source-receptor area (SRA), the LST methodology provides mass emission rate lookup tables for 1-acre, 2-acre, and 5-acre parcels by SRA. The tabulated LSTs represent the maximum mass emissions from a project that will not cause or contribute to an exceedance of state or national ambient air quality standards (CAAQS or NAAQS) for the above pollutants and were developed based on ambient concentrations of these pollutants for each SRA in the South Coast Air Basin. (SCAQMD 2008a)

For most land use projects, the highest daily emission rates occur during the site preparation and grading phases of construction; where applicable, these maximum daily emissions are used in the LST analysis.

Since land use operational emissions – mainly from associated traffic – are dispersed over a wide area, localized impacts from project operation are substantially lower than during project construction. However, an Operational LST analysis was also performed.

The proposed project site is 0.589 acre in SRA Zone 1 – Central LA. The 1-acre screening lookup tables were used to evaluate NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> impacts on nearby receptors. The nearest receptors are approximately 25 meters away from the site. Therefore, the impact evaluation was performed using the closest distance within SCAQMD LST tables of 25 meters for construction and operation. (SCAQMD 2008a)

### ***Results of Localized Significance Threshold Analysis***

The LST results provided in Tables 5 and 6 show that on-site emissions from construction and operations would meet the LST passing criteria at the nearest receptors (25 meters). Thus, impacts would be less than significant.

**PROJECTED IMPACT:** Less Than Significant (LTS)

<b>Table 5: Construction Localized Significance Threshold Evaluation</b>				
<b>Criteria Pollutants</b>	<b>Mitigated (lbs/day)</b>	<b>Threshold (lbs/day)</b>	<b>Percent of Threshold</b>	<b>Result</b>
NO <sub>x</sub>	17.9	74	24%	Pass
CO	18.6	680	3%	Pass
PM <sub>10</sub>	3.1	5	61%	Pass
PM <sub>2.5</sub>	1.6	3	52%	Pass

Sources: SCAQMD 2008a, CalEEMod version 2022.1.1.10

**Notes:**

Source-receptor area - Zone 1 – Central LA

1-acre area, 25 meters to receptor

<b>Table 6: Operations Localized Significance Threshold Evaluation</b>				
<b>Criteria Pollutants</b>	<b>Mitigated (lbs/day)</b>	<b>Threshold (lbs/day)</b>	<b>Percent of Threshold</b>	<b>Result</b>
NO <sub>x</sub>	0.7	74	0.9%	Pass
CO	10.8	680	1.6%	Pass
PM <sub>10</sub>	0.31	2	16%	Pass
PM <sub>2.5</sub>	0.08	1	8%	Pass

Sources: SCAQMD 2008a, CalEEMod version 2022.1.1.10

**Notes:**

Source-receptor area - Zone 1 – Central LA

1-acre area, 25 meters to receptor

### ***Greenhouse Gas Emissions from Construction and Operation***

Greenhouse gases – primarily carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous (N<sub>2</sub>O) oxide, collectively reported as carbon dioxide equivalents (CO<sub>2</sub>e) – are directly emitted from stationary source combustion of natural gas in equipment such as water heaters, boilers, process heaters, and furnaces. GHGs are also emitted from mobile sources such as on-road vehicles and off-road construction equipment burning fuels such as gasoline, diesel, biodiesel, propane, or natural gas (compressed or liquefied). Indirect GHG emissions result from electric power generated elsewhere (i.e., power plants) used to operate process equipment, lighting, and utilities at a facility. Also, included in GHG quantification is electric power used to pump the water supply (e.g., aqueducts, wells, pipelines) and disposal and decomposition of municipal waste in landfills. (CARB 2022)

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2022 standards improved upon the 2019 standards for new construction of, and additions and alterations to, residential, commercial, and industrial buildings. The 2022 standards went into effect on January 1, 2023 (CEC 2022).

Since the Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, water conserving plumbing fixtures, etc.), they indirectly regulate and reduce GHG emissions.

Using CalEEMod, direct onsite and offsite GHG emissions were estimated for construction and operation, and indirect offsite GHG emissions were estimated to account for electric power used by the proposed project, water conveyance, and solid waste disposal.

### ***Results of Greenhouse Gas Emissions Analyses***

The SCAQMD officially adopted an industrial facility mass emissions threshold of 10,000 metric tons (MT) CO<sub>2</sub>e per year (SCAQMD 2023) and has proposed a residential/commercial mass emissions threshold of 3,000 metric tons (MT) CO<sub>2</sub>e per year. (SCAQMD 2008b)

Table 7 shows unmitigated and mitigated GHG emissions and evaluates mitigated emissions against SCAQMD significance thresholds. Operational reduction measures incorporate typical code-required water conservation features. Off-site traffic impacts are included in these emissions estimates, along with construction emissions amortized over 30 years.

**PROJECTED IMPACT:** Less Than Significant (LTS)

<b>Table 7: Greenhouse Gas Emissions Summary and Significance Evaluation</b>				
<b>Greenhouse Gases</b>	<b>Unmitigated (MT/yr)</b>	<b>Mitigated (MT/yr)</b>	<b>Threshold (MT/yr)</b>	<b>Significance</b>
CO <sub>2</sub>	485	347	—	—
CH <sub>4</sub>	0.88	0.84	—	—
N <sub>2</sub> O	0.02	0.01	—	—
R	0.52	0.31	—	—
CO <sub>2</sub> e	513	372	3,000	LTS

Sources: SCAQMD 2008b, CalEEMod version 2022.1.1.10

Notes:

Comprises annual operational emissions plus construction emissions amortized over 30 years

LTS - Less Than Significant

## **Cumulative Effects**

As shown in Tables 3, 4, 5, and 6, the predicted air quality impacts of the proposed in-fill development project are well below SCAQMD regional thresholds and localized significance thresholds, respectively. These impacts characterize the incremental impacts of other comparable past, present, and reasonably foreseeable future in-fill development actions in the vicinity of the proposed project site per state CEQA Guidelines Section 15355(b).

### ***SCAQMD Guidance***

The SCAQMD's 2003 guidance on addressing cumulative impacts for air quality is as follows: "As Lead Agency, the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR [Environmental Impact Report]." "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant." (SCAQMD 2003)

### ***CEQA Guidelines***

As referenced above, SCAQMD cumulative air quality significance thresholds are the same as project-specific air quality significance thresholds. Because the criteria pollutant mass emissions impacts shown in Tables 3 and 4 would not be expected to exceed any of the SCAQMD air quality significance thresholds, cumulative air quality impacts from comparable in-fill development projects would also be expected to be less than significant. Therefore, potential adverse impacts from implementing the proposed project would not be "cumulatively considerable" as defined by state CEQA Guidelines Section 15064(h)(1) for air quality impacts. Per state CEQA Guidelines Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

PROJECTED IMPACT: Less Than Significant (LTS)

## **NOISE IMPACTS ANALYSIS**

### **Noise Analysis Methodology**

The screening-level noise analysis for project construction was completed based on methodology developed by the U.S. Department of Transportation Federal Highway Administration (DOT FHWA) at the John A. Volpe National Transportation Systems Center and other technical references consistent with CalEEMod outputs (equipment utilization). The DOT FHWA methodology uses actual noise measurement data collected during the Boston “Big Dig” project (1991-2006) as reference levels for a wide variety of construction equipment in common use, such as on the proposed project. This noise analysis did not include field measurements of ambient noise in the vicinity of the project site.

The FHWA noise model provides relatively conservative predictions because it does not account for site-specific geometry, dimensions of nearby structures, and local environmental conditions that can affect sound transmission, reflection, and attenuation. As a result, actual measured sound levels at receptors may vary somewhat from predictions, typically lower. Additionally, the impacts of noise upon receptors (persons) are subjective because of differences in individual sensitivities and perceptions.

Noise impacts were evaluated against community noise standards contained in the City or County General Plan or other state or federal agency as applicable to the vicinity of the project site. For this project, the City of Los Angeles Municipal Code (LAMC), Chapter XI, Noise Regulation, Sections 112.02, 112.03, 112.05, and 41.40 contain the applicable evaluation criteria. Screening-level project-generated noise is evaluated in relation to established thresholds of significance. Additionally, the same methods are used to determine noise impacts on the nearest receptor. Neighborhood-level noise evaluation criteria are contained in the Noise Element of the Los Angeles City General Plan (City 1999).

During construction activities, the project would generate noise due to operation of minimal off-road equipment, portable equipment, and vehicles at or near the project site. No significant increase in traffic is expected due to this relatively small project. No strong sources of vibrations are planned to be used during construction activities.

Since the project is near urban streets, the incremental effect of project operations (possible slightly increased traffic) would not be quantifiable against existing traffic noise (background) in the project vicinity (i.e., less than significant impact). Also, since no airport is closer than 2 miles from the project site, evaluation of aircraft noise upon the project is not required.

### **Environmental Setting**

#### ***Noise Descriptors***

Noise is typically described as any unwanted or objectionable sound. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity, the A-weighted decibel scale (dBA). Table 8 lists common sources of sound and their intensities in dBA.

Table 8: Typical Sound Level Characteristics		
Pressure (N/m <sup>2</sup> )	Level (dB)	Sound Level Characteristic
2000	160	Rocket Launch
600	150	Military Jet Plane Takeoff
200	140	Threshold of Pain
60	130	Commercial Jet Plane Takeoff
20	120	Industrial Chipper or Punch Press
6	110	Loud Automobile Horn
2	100	Passing Diesel Truck – Curb Line
0.6	90	Factory - Heavy Manufacturing
0.2	80	Factory - Light Manufacturing
0.06	70	Open Floor Office - Cubicles
0.02	60	Conversational Speech
0.006	50	Private Office - Walled
0.002	40	Residence in Daytime
0.0006	30	Bedroom at Night
0.0002	20	Recording or Broadcasting Studio
0.00006	10	Threshold of Good Hearing - Adult
0.00002	0	Threshold of Excellent Hearing - Child

Sources: Broch 1971, Plog 1988

Notes:

Reference Level  $P_0 = 0.00002 \text{ N/m}^2 = 0.0002 \text{ } \mu\text{bar}$

$\text{N/m}^2$  = Newtons per square meter (the Newton is the unit of force derived in the metric system); it is equal to the amount of net force required to accelerate one kilogram of mass at a rate of one meter per second squared ( $1 \text{ kg} \cdot 1 \text{ m/s}^2$ ) in the direction of the applied force.

In most situations, a 3-dBA change in sound pressure is considered a “just-detectable” difference. A 5-dBA change (either louder or quieter) is readily noticeable, and 10-dBA change is a doubling (if louder) or halving (if quieter) of the subjective loudness. Sound from a small, localized source (a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (drops off) at a rate of 6 dBA for each doubling of the distance.

The duration of noise and the time period at which it occurs are important factors in determining the impact of noise on receptors. A single number called the equivalent continuous noise level ( $L_{eq}$ ) may be used to describe sound that is changing in level. It is also used to describe the acoustic range of the noise source being measured, which is accomplished through the maximum  $L_{eq}$  ( $L_{max}$ ) and minimum  $L_{eq}$  ( $L_{min}$ ) indicators.

In determining the daily measure of community noise, it is important to account for the difference in human response to daytime and nighttime noise. Noise is more disturbing at night than during the day, and noise indices have been developed to account for the varying duration of noise events over time, as well as community response to them. The Community Noise Equivalent Level (CNEL) adds a 5-dB penalty to the “nighttime” hourly noise levels (HNLs) (i.e., 7:00 p.m. to 10:00 p.m.) and the Day-Night Average Level ( $L_{dn}$ ) adds a 10-dB penalty to the evening HNLs (Caltrans 2020, FTA 2006).



### ***Vibration Descriptors***

Vibration is a unique form of noise because its energy is carried through structures and the earth, whereas noise is carried through the air. Thus, vibration is generally felt rather than heard. Typically, ground borne vibration generated by construction activities attenuates rapidly as distance from the source of the vibration increases. Actual human and structural response to different vibration levels is influenced by a combination of factors, including soil type, distance between the source and receptor, duration, and the number of perceived events.

While not a direct health hazard, the energy transmitted through the ground as vibration may result in structural damage, which may be costly to repair and dangerous in the event of structural failure. To assess the potential for structural damage associated with vibration, the vibratory ground motion in the vicinity of the affected structure is measured in terms of point peak velocity/peak particle velocity (PPV) in the vertical and horizontal directions (vector sum). A freight train passing at 100 feet may cause PPVs of 0.1 inch per second, while a strong earthquake may produce PPVs in the range of 10 inches per second. Minor cosmetic damage to buildings may begin in the range of 0.5 inch per second (Caltrans 2020, FTA 2006).

### ***Existing Noise Environment - Cumulative***

The project site is in the City of Los Angeles, Los Angeles County, in a characteristically urban and densely populated area subject to noise from local traffic on public streets (e.g., West Olympic Boulevard, South Hoover Street), buses, trains, construction, and small power equipment (e.g., lawn mowers, edger, etc.). The FHWA noise model puts the expected daytime ambient noise from known sources at about 56 dBA at the nearest receptors to the proposed project. This cumulative model is based on traffic noise from West Olympic Boulevard as well as a general 40 dBA urban background noise.

### ***Sensitive Receptors***

Some land uses are generally regarded as being more sensitive to noise than others due to the types of population groups or activities involved. Sensitive population groups include children and the elderly. The City of Los Angeles General Plan Noise Element (City 1999) also includes residential areas as noise-sensitive land uses. Other sensitive land uses generally include hospitals, schools, childcare facilities, senior facilities, libraries, churches, and parks.

The nearest schools to the project site are Leo Politi Elementary School, approximately 500 feet (150 meters, 0.09 mile), one block south of the project site (across West Olympic Boulevard), Hoover Street Elementary School, approximately 800 feet (240 meters, 0.15 mile), two blocks north of the project site, and Berendo Middle School/Monsignor Oscar Romero Charter Middle School, approximately 2,700 feet (820 meters, 0.51 mile), seven blocks southwest of the project site. The long attenuation distances and interceding buildings (insertion losses) would substantially shield all these schools from construction noise.

The nearest residential receptors are north, south, and west of the site, approximately 50 feet (15 meters) from the central construction zones; and, for consistency with LST, a source-receptor distance of 25 meters (82 feet) was used. All construction activities would be short-term and temporary. All construction work is planned to be conducted during daytime within the permissible construction hours set by the City; no nighttime work is planned to be performed. Upon completion of construction, construction generated noise would permanently cease. Since the proposed project



is located in a dense urban area and not within 500 feet (150 meters) of a major freeway, no significant additional long-term traffic is expected, and therefore no additional project-related noise is expected over the long term.

## **Regulatory Setting**

### ***California***

The State of California does not promulgate statewide standards for environmental noise but requires each city and county to include a noise element in its general plan [California Government Code Section 65302(f)]. In addition, Title 4 of the CCR has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. In general, the guidelines require that community noise standards:

- Protect residents from the harmful and annoying effects of exposure to excessive noise;
- Prevent incompatible land uses from encroaching upon existing or programmed land uses likely to create significant noise impacts; and
- Encourage the application of state-of-the-art land use planning methodologies in the area of managing and minimizing potential noise conflicts.

Construction vibration is regulated at the state level in accordance with standards established by the *Transportation and Construction-Induced Vibration Guidance Manual* issued by Caltrans in 2004. Continuous sources include the use of vibratory compaction equipment and other construction equipment that creates vibration other than in single events. Transient sources create a single isolated vibration event, such as blasting. Thresholds for continuous sources are 0.5 and 0.1 inch per second PPV for structural damage and annoyance, respectively. Thresholds for transient sources are 1.0 and 0.9 PPV for structural damage and annoyance, respectively (Caltrans 2020).

### ***City of Los Angeles General Plan –Noise Element***

The Noise Element of the Los Angeles City General Plan contains *Exhibit I: Guidelines for Noise Compatible Land Use*, where the land use categories of “Residential Single Family, Duplex, Mobile Home” and “Residential Multi-Family” both share a “Conditionally Acceptable” threshold of 65 dB CNEL, and a “Normally Unacceptable” threshold of 70 dB CNEL (City 1999).

### ***City of Los Angeles Municipal Code – Chapter XI, Noise Regulation***

For this project, the City of Los Angeles Municipal Code (LAMC), Chapter XI, Noise Regulation, Sections 112.02, 112.03, 112.05, and 41.40 contain the applicable evaluation criteria.

Operational on-site stationary sources of mechanical noise are required to comply with the LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties, e.g., nearby residential buildings, by more than 5 dBA. Modern roof-mounted mechanical equipment is designed to meet this standard.

LAMC Section 112.03 references Section 41.40 which regulates noise from construction activities. Outdoor construction activities that generate noise are prohibited between the nighttime hours of 9:00 pm and 7:00 am Monday through Friday, and between 6:00 pm and 8:00 am on Saturdays

and national holidays. Construction activities are prohibited on Sundays. The construction activities associated with the proposed project would comply with these LAMC requirements.

Per Section 112.05, construction noise impacts would be significant if noise from powered equipment or powered hand tools used for construction within 500 feet (150 meters) of a residential zone exceeds 75 A-weighted decibels (dBA) at a distance of 50 feet (15 meters) from the noise source between the hours of 7:00 am and 10:00 pm. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the 75 dBA limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment. However, the burden of proof of technical infeasibility is placed upon the person or persons generating the noise, i.e., the contractor and owner or owner's agent.

### **Results of Cumulative Screening Noise Analysis**

The proposed project can be characterized as in-fill development of a new 4-level, 8-unit, multifamily residential building with an on-grade parking garage. Most noise would occur during the demolition, grading, site preparation, and building construction phases when heavy equipment would typically be operating outside.

During each of the six construction phases there would be a different mix of equipment operating and cumulative noise levels would vary based on the amount of equipment in operation and the location of each activity at the project site. In general, use of off-road equipment and portable equipment would generate noise due to engine mechanicals, engine exhaust, driveline mechanicals, shaft-driven devices and accessories, hydraulics operation, ground friction and displacement, and gravity drops (dumping, unloading).

Since no intense percussive actions (e.g., hard rock-breaking, large pile-driving) are planned to occur during the site work, no strong groundborne vibrations are expected to be generated that could affect nearby structures or be noticeable to their occupants.

Types of equipment (FHWA 2006) to be used during the project and noise-emitting characteristics (i.e., usage factors, reference dBA, and percussive source) are shown in Table 9 consistent with CalEEMod outputs (Attachment 1).

The project is expected to require approximately 12 months of planned work activities (i.e., from mobilization to substantial completion) comprising six construction phases (CalEEMod defaults):

- 1) Demolition;
- 2) Site Preparation;
- 3) Grading;
- 4) Building construction;
- 5) Paving; and
- 6) Architectural coating.

Deviations from this schedule would not affect the noise analysis because noise does not persist or accumulate in the environment over time. To assess cumulative noise impacts, nearby street traffic noise and urban background noise was logarithmically added to construction noise.

Table 9: FHWA Noise Reference Levels and Usage Factors							
CalEEMod Construction Detail			FHWA Equipment Type	Ref.	Usage Factor	Ref. Level	Percussive Source
Phase Name	Equipment Description	Qty.			percent	dBA	Yes/No
Demolition (1)	Concrete/Industrial Saws	1	Concrete Saw	1	20%	90	No
	Rubber Tired Dozers	1	Tractor (rubber tire)	1	40%	84	No
	Tractors/Loaders/Backhoes	2	Backhoe (with loader)	1	40%	80	No
Site Preparation (2)	Graders	1	Grader	1	40%	85	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
	Excavators	2	Excavator (hydraulic)	1	40%	85	No
Grading (3)	Graders	1	Grader	1	40%	85	No
	Rubber Tired Dozers	1	Tractor (rubber tire)	1	40%	84	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
	Excavators	2	Excavator (hydraulic)	1	40%	85	No
Building Construction (4)	Cranes	1	Crane	1	16%	85	No
	Forklifts	2	Forklift	1	40%	80	No
	Tractors/Loaders/Backhoes	2	Backhoe (with loader)	1	40%	80	No
Paving (5)	Cement and Mortar Mixers	4	All Other Equipment > 5 HP	1	50%	85	No
	Pavers	1	Paver (asphalt)	1	50%	85	No
	Rollers	1	Roller	1	20%	85	No
	Tractors/Loaders/Backhoes	1	Backhoe (with loader)	1	40%	80	No
Architectural Coating (6)	Air Compressors	1	Compressor (air)	1	40%	80	No

Sources: CalEEMod version 2022.1.1.10, FHWA 2006

Table 10 shows a comparison of: screening-level estimated daytime exterior noise impacts for peak construction activities at designated receptors, and the thresholds outlined in LAMC Chapter XI and Noise Element, using FHWA attenuation algorithms. If the threshold is not exceeded, then the project should be considered acceptable.

<b>Table 10: Estimated Peak Activity Daytime Noise Impacts - Residential Receptors (mitigated)<sup>d, e</sup></b>				
<b>Construction Phases</b>	<b>Normal Acceptance Criteria – LAMC 112.05 &amp; Land Use Guidelines</b>			
	<b>Modeled Noise Level (Leq dBA)<sup>a</sup></b>	<b>CalEEMod Duration (days)</b>	<b>Significance Threshold (CNEL dBA)<sup>b, c</sup></b>	<b>Exceeds Threshold (Yes/No)?</b>
Background	56.0	-	-	No
Demolition	73.4	10	75	No
Site Preparation	73.9	10	75	No
Grading	74.8	20	75	No
Building Construction	70.9	180	75	No
Paving	70.2	10	75	No
Architectural Coating	64.3	20	75	No
Long Term Impact	61.9	-	70	No

Sources: CalEEMod version 2022.1.1.10, FHWA 2006, FTA 2006, Broch 1971, Plog 1988, LAMC 112.05, City 1999

**Notes:**

<sup>a</sup> Includes existing street traffic (West Olympic Boulevard) and urban ambient noise sources (cumulative impacts)

<sup>b</sup> Construction (Phases): LAMC 112.05

<sup>c</sup> Operation (Long Term Impact): General Plan Noise Element *Exhibit I: Guidelines for Noise Compatible Land Use*

<sup>d</sup> Modeled residential receptors are 25 meters (82 feet) north, south, and west of the center of the construction zone

<sup>e</sup> Control comprises noise barriers on site perimeter (see Discussion)

## Discussion

### *Construction Noise – LAMC Sections 112.03 and 112.05*

Construction noise impacts would be significant if, as defined by Los Angeles Municipal Code (LAMC) Section 112.05, noise from powered equipment or powered hand tools used for construction within 500 feet (150 meters) of a residential zone exceeds 75 A-weighted decibels (dBA) at a distance of 50 feet (15 meters) from the noise source between the hours of 7:00 am and 10:00 pm. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the 75 dBA limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of the equipment. However, the burden of proof of technical infeasibility is placed upon the person or persons generating the noise, i.e., the contractor and owner or owner's agent.

LAMC Section 112.03 references Section 41.40 which regulates noise from construction activities. Outdoor construction activities that generate noise are prohibited between the nighttime hours of 9:00 pm and 7:00 am Monday through Friday, and between 6:00 pm and 8:00 am on Saturdays and national holidays. Construction activities are prohibited on Sundays. The construction activities associated with the proposed project would comply with these LAMC requirements.

Although the estimated construction-related exterior noise levels associated with the proposed project are modeled to normally be below the 75 dBA threshold, there may be times when the construction activities could intermittently and marginally exceed the 75 dBA threshold at 50 feet from the noise source. To minimize impacts, the project will implement technically feasible control measures in compliance with the standards set forth in LAMC Section 112.05. Specifically, the use of deflectors/barriers such as plywood construction fencing (½-inch thickness), flexible sound-

absorbing curtains, or existing intervening buildings, can reduce line-of-sight exterior noise levels by approximately 5 to 15 dBA, depending on the applied physical configuration (FHWA 2006). The estimated noise impacts shown in Table 10 incorporate these control measures.

With the application of construction noise control measures exterior noise levels would be reduced by approximately 10 to 15 dBA. Therefore, based on the provisions set forth in LAMC 112.05, implementation of the LAMC-required noise control measures described below would enable the proposed project to comply with the LAMC, and construction noise impacts would be less than significant.

The construction noise control measures required by LAMC 112.05 would include the following:

- 1) The project shall comply with the City of Los Angeles Noise Ordinance No. 161,574 (see LAMC Section 112.05), and any subsequent ordinances (et seq), which prohibit the emission or creation of noise beyond certain levels.
- 2) Construction shall be restricted to the hours of 7:00 am to 9:00 pm Monday through Friday, and 8:00 am to 6:00 pm on Saturdays or national holidays. No construction work shall be performed at any time on Sundays.
- 3) Construction activities shall be scheduled to avoid operating several pieces of large equipment simultaneously, which can cumulatively cause higher noise levels.
- 4) Noise-generating equipment operated at the project site shall be equipped with the most effective and technologically feasible noise control devices, such as mufflers, lagging (enclosures for exhaust pipes), and/or motor enclosures. All equipment shall be properly maintained to ensure that no additional noise, due to worn or improperly maintained parts, would be generated.
- 5) Noise-generating equipment, where its location on the site may be flexible (e.g., air compressors, generators, cement and mortar mixers, and materials deliveries), shall be placed as far as practical from the nearest noise sensitive land uses. Natural and/or fabricated barriers (e.g., trees, fencing, curtains) shall be used to screen propagation of noise from such activities toward these land uses to the maximum extent possible.
- 6) For outside work BMPs, the project shall implement noise barriers comprising plywood construction fencing and/or flexible sound-absorbing curtains as practicable. The noise barriers shall be erected around the perimeter of the construction site to minimize the transmission of construction noise toward nearby noise-sensitive land uses. The noise barriers shall be at least 8 feet in height and constructed of materials achieving an Insertion Loss (IL) coefficient of at least 5 dBA for flexible curtains, 8 dBA for rigid plywood fencing, or 10 dBA in combination (FHWA 2006).
- 7) The project shall comply with the City of Los Angeles Building Regulations Ordinance No. 178,048 (see LAMC Section 91.106.4.8), which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public, i.e., in plain sight.

### ***Operational Noise – LAMC Section 112.02 and General Plan Noise Element***

Upon completion of construction and occupancy of the proposed project, on-site operational noise would be generated mainly by heating, ventilation, and air conditioning (HVAC) equipment installed on the roof of the new building. However, the overall noise levels generated by the new HVAC equipment are not expected to be substantially greater than generated by older HVAC equipment installed on existing buildings near the project site. As such, the new HVAC equipment associated with the proposed project would not represent a substantially new type or source of noise in the general vicinity. In addition, the operation of this and any other on-site stationary sources of mechanical noise would be required to comply with the LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties, e.g., nearby residential buildings, by more than 5 dBA. Such equipment is designed to meet this standard.

Furthermore, the long term operational impact of the proposed project is predicted to be below the thresholds stated in the Noise Element of the Los Angeles City General Plan.

No adverse impacts are expected from, and no noise control measures would be required for, the operation of the proposed project. Therefore, the operational noise impacts of the proposed project would be less than significant.

Interior areas of the completed project would not be adversely impacted by ambient (outdoor) urban noise because the project would be constructed to meet applicable California Code of Regulations (CCR) Title 24 Parts 6 and 11 building energy efficiency standards (CEC 2022). Thermal insulation, e.g., fiberglass batting in exterior walls and double-pane windows, also attenuates sound transmission and thus would provide an acceptable interior noise environment, which is particularly important for sensitive land uses. Specifically, the proposed project would be designed and constructed to maintain interior noise levels at or below a Community Noise Equivalent Level (CNEL) of 45 dBA in any normally occupied space of the project with no other sources of interior noise operating, such as HVAC, appliances, power tools, or office equipment. As such, interior noise impacts of the proposed project would be less than significant.

### ***Overall Project***

This study predicts a less than significant impact in accordance with the LAMC and the Land Use Guidelines. As described above, temporary noise barriers would need to be installed as a control measure during the initial stages of construction.

**PROJECTED IMPACT:** Less Than Significant (LTS)

### **Cumulative Effects**

As shown in Table 10, noise impacts of the proposed in-fill development project are below LAMC and Land Use Guidelines significance thresholds. These impacts characterize the incremental impacts of other comparable past, present, and reasonably foreseeable future in-fill development actions in the vicinity of the proposed project site per state CEQA Guidelines Section 15355(b).

The FHWA noise model puts the expected daytime ambient noise from known sources at about 56 dBA at the nearest receptors to the proposed project. This cumulative model is based on traffic from West Olympic Boulevard as well as a general cumulative 40 dBA urban background noise. Although noise does not persist or accumulate in the environment over time, this accounts for any cumulative effects of comparable in-fill development projects.

### ***CEQA Guidelines***

Because the cumulative noise impacts shown in Table 10 would not be expected to exceed any of the LAMC or Land Use Guidelines significance thresholds, cumulative noise impacts from comparable in-fill development projects would also be expected to be less than significant. Therefore, potential adverse impacts from implementing the proposed project would not be “cumulatively considerable” as defined by state CEQA Guidelines Section 15064(h)(1) for noise impacts. Per state CEQA Guidelines Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.

PROJECTED IMPACT: Less Than Significant (LTS)

### **CLOSING**

Thank you very much for the opportunity to be of assistance to the 957-967 Arapahoe Street project. Should you have any questions, please contact me at (805) 293-7867 (office).

Sincerely,



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Enclosures/Attachments:

1. CalEEMod Outputs



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## ATTACHMENT 1 – CALEEMOD OUTPUTS

# Arapahoe Apartments at 957-967 Arapahoe Street, Los Angeles Detailed Report

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### 3. Construction Emissions Details

#### 3.1. Demolition (2024) - Unmitigated

3.2. Demolition (2024) - Mitigated

3.3. Site Preparation (2024) - Unmitigated

3.4. Site Preparation (2024) - Mitigated

3.5. Grading (2024) - Unmitigated

3.6. Grading (2024) - Mitigated

3.7. Building Construction (2024) - Unmitigated

3.8. Building Construction (2024) - Mitigated

3.9. Paving (2024) - Unmitigated

3.10. Paving (2024) - Mitigated

3.11. Architectural Coating (2024) - Unmitigated

3.12. Architectural Coating (2024) - Mitigated

#### 4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.2. Unmitigated

4.3.1. Mitigated

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.4.1. Mitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.5.1. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated



5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Arapahoe Apartments at 957-967 Arapahoe Street, Los Angeles
Construction Start Date	1/8/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	16.8
Location	34.05367066549883, -118.28576914648299
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4013
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.10

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
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Apartments Mid Rise	109	Dwelling Unit	0.03	74,121	1,386	—	323	Apartments & Amenities
Enclosed Parking with Elevator	24.3	1000sqft	0.56	24,272	0.00	—	—	Subterranean Parking Garage (footprint)

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-B	Water Active Demolition Sites
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Construction	C-13	Use Low-VOC Paints for Construction
Transportation	T-1	Increase Residential Density
Transportation	T-3	Provide Transit-Oriented Development
Transportation	T-4	Integrate Affordable and Below Market Rate Housing
Transportation	T-14*	Provide Electric Vehicle Charging Infrastructure
Transportation	T-15	Limit Residential Parking Supply
Transportation	T-31-A*	Locate Project in Area with High Destination Accessibility
Transportation	T-32*	Orient Project Toward Transit, Bicycle, or Pedestrian Facility
Transportation	T-34*	Provide Bike Parking
Energy	E-2	Require Energy Efficient Appliances
Energy	E-12-A	Install Alternative Type of Water Heater in Place of Gas Storage Tank Heater in Residences
Energy	E-12-B	Install Electric Space Heater in Place of Natural Gas Heaters in Residences
Energy	E-13	Install Electric Ranges in Place of Gas Ranges

Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes
Water	W-7	Adopt a Water Conservation Strategy
Waste	S-4*	Recycle Demolished Construction Material
Area Sources	AS-2	Use Low-VOC Paints

\* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.97	6.61	14.0	0.02	0.26	1.29	1.56	0.24	0.31	0.55	—	3,061	3,061	0.13	0.12	6.31	3,107
Mit.	0.97	6.61	14.0	0.02	0.26	1.29	1.56	0.24	0.31	0.55	—	3,061	3,061	0.13	0.12	6.31	3,107
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.0	17.9	18.6	0.04	0.69	6.29	6.98	0.64	2.83	3.47	—	5,915	5,915	0.28	0.52	0.20	6,077
Mit.	19.3	17.9	18.6	0.04	0.69	2.35	3.05	0.64	0.93	1.57	—	5,915	5,915	0.28	0.52	0.20	6,077
% Reduced	20%	—	—	—	—	63%	56%	—	67%	55%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.94	4.95	8.40	0.01	0.19	1.07	1.26	0.18	0.33	0.50	—	2,055	2,055	0.09	0.11	1.69	2,092

Mit.	1.68	4.95	8.40	0.01	0.19	0.84	1.03	0.18	0.22	0.40	—	2,055	2,055	0.09	0.11	1.69	2,092
% Reduced	13%	—	—	—	—	22%	19%	—	33%	21%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.35	0.90	1.53	< 0.005	0.03	0.20	0.23	0.03	0.06	0.09	—	340	340	0.01	0.02	0.28	346
Mit.	0.31	0.90	1.53	< 0.005	0.03	0.15	0.19	0.03	0.04	0.07	—	340	340	0.01	0.02	0.28	346
% Reduced	13%	—	—	—	—	22%	19%	—	33%	21%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	150	150	55.0	55.0	55.0	—	—	—	—	—	—	—
Unmit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Mit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	150	150	55.0	55.0	55.0	—	—	—	—	—	—	—
Unmit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Mit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No
Mit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

## 2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.97	6.61	14.0	0.02	0.26	1.29	1.56	0.24	0.31	0.55	—	3,061	3,061	0.13	0.12	6.31	3,107
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	24.0	17.9	18.6	0.04	0.69	6.29	6.98	0.64	2.83	3.47	—	5,915	5,915	0.28	0.52	0.20	6,077
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.94	4.95	8.40	0.01	0.19	1.07	1.26	0.18	0.33	0.50	—	2,055	2,055	0.09	0.11	1.69	2,092
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.35	0.90	1.53	< 0.005	0.03	0.20	0.23	0.03	0.06	0.09	—	340	340	0.01	0.02	0.28	346

## 2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.97	6.61	14.0	0.02	0.26	1.29	1.56	0.24	0.31	0.55	—	3,061	3,061	0.13	0.12	6.31	3,107
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	19.3	17.9	18.6	0.04	0.69	2.35	3.05	0.64	0.93	1.57	—	5,915	5,915	0.28	0.52	0.20	6,077
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.68	4.95	8.40	0.01	0.19	0.84	1.03	0.18	0.22	0.40	—	2,055	2,055	0.09	0.11	1.69	2,092
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.31	0.90	1.53	< 0.005	0.03	0.15	0.19	0.03	0.04	0.07	—	340	340	0.01	0.02	0.28	346

## 2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.30	0.96	14.3	0.02	0.04	0.55	0.59	0.04	0.10	0.14	51.3	2,866	2,918	5.32	0.09	6.41	3,085
Mit.	2.86	0.65	10.8	0.01	0.03	0.28	0.31	0.03	0.05	0.08	49.1	2,012	2,061	5.05	0.06	3.48	2,207
% Reduced	13%	32%	24%	44%	15%	50%	48%	14%	50%	40%	4%	30%	29%	5%	41%	46%	28%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.56	0.95	6.52	0.02	0.03	0.55	0.59	0.03	0.10	0.13	51.3	2,778	2,830	5.32	0.10	0.68	2,992
Mit.	2.12	0.61	3.33	0.01	0.03	0.28	0.30	0.03	0.05	0.08	49.1	1,957	2,007	5.05	0.06	0.61	2,150
% Reduced	17%	36%	49%	45%	16%	50%	48%	16%	50%	42%	4%	30%	29%	5%	41%	11%	28%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.05	1.00	11.6	0.02	0.03	0.55	0.59	0.04	0.10	0.13	51.3	2,811	2,862	5.32	0.10	3.07	3,027
Mit.	2.62	0.66	8.36	0.01	0.03	0.28	0.31	0.03	0.05	0.08	49.1	1,981	2,030	5.06	0.06	1.80	2,175
% Reduced	14%	34%	28%	44%	15%	50%	48%	14%	50%	40%	4%	30%	29%	5%	41%	41%	28%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.56	0.18	2.12	< 0.005	0.01	0.10	0.11	0.01	0.02	0.02	8.49	465	474	0.88	0.02	0.51	501
Mit.	0.48	0.12	1.53	< 0.005	0.01	0.05	0.06	0.01	0.01	0.01	8.13	328	336	0.84	0.01	0.30	360
% Reduced	14%	34%	28%	44%	15%	50%	48%	14%	50%	40%	4%	30%	29%	5%	41%	41%	28%



Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	150	150	55.0	55.0	55.0	—	—	—	—	—	—	—
Unmit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Mit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	150	150	55.0	55.0	55.0	—	—	—	—	—	—	—
Unmit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Mit.	No	No	No	No	No	No	No	No	No	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No
Mit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

## 2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.84	0.61	6.92	0.02	0.01	0.55	0.56	0.01	0.10	0.11	—	1,600	1,600	0.08	0.06	5.88	1,627
Area	2.45	0.07	7.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	20.9	20.9	< 0.005	< 0.005	—	20.9
Energy	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,193	1,193	0.09	0.01	—	1,198
Water	—	—	—	—	—	—	—	—	—	—	7.79	52.6	60.3	0.80	0.02	—	86.2
Waste	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53

# Arapahoe Apartments at 957-967 Arapahoe Street, Los Angeles Detailed Report, 4/20/2023

Total	3.30	0.96	14.3	0.02	0.04	0.55	0.59	0.04	0.10	0.14	51.3	2,866	2,918	5.32	0.09	6.41	3,085
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.82	0.67	6.40	0.01	0.01	0.55	0.56	0.01	0.10	0.11	—	1,533	1,533	0.08	0.07	0.15	1,555
Area	1.72	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,193	1,193	0.09	0.01	—	1,198
Water	—	—	—	—	—	—	—	—	—	—	7.79	52.6	60.3	0.80	0.02	—	86.2
Waste	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	2.56	0.95	6.52	0.02	0.03	0.55	0.59	0.03	0.10	0.13	51.3	2,778	2,830	5.32	0.10	0.68	2,992
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.82	0.68	6.56	0.02	0.01	0.55	0.56	0.01	0.10	0.11	—	1,551	1,551	0.08	0.07	2.54	1,576
Area	2.22	0.05	4.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.3	14.3	< 0.005	< 0.005	—	14.3
Energy	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,193	1,193	0.09	0.01	—	1,198
Water	—	—	—	—	—	—	—	—	—	—	7.79	52.6	60.3	0.80	0.02	—	86.2
Waste	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	3.05	1.00	11.6	0.02	0.03	0.55	0.59	0.04	0.10	0.13	51.3	2,811	2,862	5.32	0.10	3.07	3,027
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.15	0.12	1.20	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	257	257	0.01	0.01	0.42	261
Area	0.40	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.37	2.37	< 0.005	< 0.005	—	2.38
Energy	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	198	198	0.02	< 0.005	—	198
Water	—	—	—	—	—	—	—	—	—	—	1.29	8.70	9.99	0.13	< 0.005	—	14.3
Waste	—	—	—	—	—	—	—	—	—	—	7.20	0.00	7.20	0.72	0.00	—	25.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.56	0.18	2.12	< 0.005	0.01	0.10	0.11	0.01	0.02	0.02	8.49	465	474	0.88	0.02	0.51	501

## 2.6. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.42	0.31	3.47	0.01	0.01	0.28	0.28	< 0.005	0.05	0.05	—	803	803	0.04	0.03	2.95	816
Area	2.42	0.07	7.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	20.9	20.9	< 0.005	< 0.005	—	20.9
Energy	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,151	1,151	0.09	0.01	—	1,155
Water	—	—	—	—	—	—	—	—	—	—	5.61	37.8	43.5	0.58	0.01	—	62.1
Waste	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	2.86	0.65	10.8	0.01	0.03	0.28	0.31	0.03	0.05	0.08	49.1	2,012	2,061	5.05	0.06	3.48	2,207
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.41	0.34	3.21	0.01	0.01	0.28	0.28	< 0.005	0.05	0.05	—	769	769	0.04	0.03	0.08	780
Area	1.69	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,151	1,151	0.09	0.01	—	1,155
Water	—	—	—	—	—	—	—	—	—	—	5.61	37.8	43.5	0.58	0.01	—	62.1
Waste	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	2.12	0.61	3.33	0.01	0.03	0.28	0.30	0.03	0.05	0.08	49.1	1,957	2,007	5.05	0.06	0.61	2,150
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.41	0.34	3.29	0.01	0.01	0.28	0.28	< 0.005	0.05	0.05	—	778	778	0.04	0.03	1.27	791
Area	2.19	0.05	4.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.3	14.3	< 0.005	< 0.005	—	14.3
Energy	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,151	1,151	0.09	0.01	—	1,155
Water	—	—	—	—	—	—	—	—	—	—	5.61	37.8	43.5	0.58	0.01	—	62.1

Waste	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	2.62	0.66	8.36	0.01	0.03	0.28	0.31	0.03	0.05	0.08	49.1	1,981	2,030	5.06	0.06	1.80	2,175
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.07	0.06	0.60	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	129	129	0.01	0.01	0.21	131
Area	0.40	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.37	2.37	< 0.005	< 0.005	—	2.38
Energy	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	190	190	0.01	< 0.005	—	191
Water	—	—	—	—	—	—	—	—	—	—	0.93	6.27	7.20	0.10	< 0.005	—	10.3
Waste	—	—	—	—	—	—	—	—	—	—	7.20	0.00	7.20	0.72	0.00	—	25.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.48	0.12	1.53	< 0.005	0.01	0.05	0.06	0.01	0.01	0.01	8.13	328	336	0.84	0.01	0.30	360

### 3. Construction Emissions Details

#### 3.1. Demolition (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	1.04	1.04	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.16	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.87	3.87	< 0.005	< 0.005	—	3.88
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.01	135
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.3	32.3	< 0.005	< 0.005	< 0.005	33.6
Hauling	0.02	1.16	0.43	0.01	0.01	0.24	0.25	0.01	0.06	0.08	—	896	896	0.05	0.14	0.05	940
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.88	0.88	< 0.005	< 0.005	< 0.005	0.92
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.5	24.5	< 0.005	< 0.005	0.02	25.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.06	4.06	< 0.005	< 0.005	< 0.005	4.27

### 3.2. Demolition (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	0.66	0.66	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.16	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolition	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.87	3.87	< 0.005	< 0.005	—	3.88
Demolition	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.01	135
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.3	32.3	< 0.005	< 0.005	< 0.005	33.6
Hauling	0.02	1.16	0.43	0.01	0.01	0.24	0.25	0.01	0.06	0.08	—	896	896	0.05	0.14	0.05	940
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.88	0.88	< 0.005	< 0.005	< 0.005	0.92
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.5	24.5	< 0.005	< 0.005	0.02	25.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.06	4.06	< 0.005	< 0.005	< 0.005	4.27

### 3.3. Site Preparation (2024) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	7.04	11.2	0.02	0.36	—	0.36	0.33	—	0.33	—	1,820	1,820	0.07	0.01	—	1,827
Dust From Material Movement	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.9	49.9	< 0.005	< 0.005	—	50.0
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.26	8.26	< 0.005	< 0.005	—	8.29
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.01	135
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.3	32.3	< 0.005	< 0.005	< 0.005	33.6
Hauling	0.06	3.95	1.46	0.02	0.04	0.80	0.84	0.04	0.22	0.26	—	3,040	3,040	0.16	0.49	0.18	3,189
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.88	0.88	< 0.005	< 0.005	< 0.005	0.92
Hauling	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.3	83.3	< 0.005	0.01	0.08	87.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.01	14.5

### 3.4. Site Preparation (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	7.04	11.2	0.02	0.36	—	0.36	0.33	—	0.33	—	1,820	1,820	0.07	0.01	—	1,827

## Arapahoe Apartments at 957-967 Arapahoe Street, Los Angeles Detailed Report, 4/20/2023

Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.9	49.9	< 0.005	< 0.005	—	50.0
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.26	8.26	< 0.005	< 0.005	—	8.29
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.01	135
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.3	32.3	< 0.005	< 0.005	< 0.005	33.6
Hauling	0.06	3.95	1.46	0.02	0.04	0.80	0.84	0.04	0.22	0.26	—	3,040	3,040	0.16	0.49	0.18	3,189

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.88	0.88	< 0.005	< 0.005	< 0.005	0.92
Hauling	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.3	83.3	< 0.005	0.01	0.08	87.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.01	14.5

### 3.5. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	13.8	16.3	0.02	0.65	—	0.65	0.60	—	0.60	—	2,676	2,676	0.11	0.02	—	2,685
Dust From Material Movement	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.76	0.90	< 0.005	0.04	—	0.04	0.03	—	0.03	—	147	147	0.01	< 0.005	—	147

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Dust From Material Movement	—	—	—	—	—	0.29	0.29	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.3	24.3	< 0.005	< 0.005	—	24.4
Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.80	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	167	167	0.01	0.01	0.02	169
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.3	32.3	< 0.005	< 0.005	< 0.005	33.6
Hauling	0.06	3.95	1.46	0.02	0.04	0.80	0.84	0.04	0.22	0.26	—	3,040	3,040	0.16	0.49	0.18	3,189
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.30	9.30	< 0.005	< 0.005	0.02	9.43
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.77	1.77	< 0.005	< 0.005	< 0.005	1.84
Hauling	< 0.005	0.22	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	167	167	0.01	0.03	0.17	175
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.31

Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.6	27.6	< 0.005	< 0.005	0.03	29.0
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### 3.6. Grading (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	13.8	16.3	0.02	0.65	—	0.65	0.60	—	0.60	—	2,676	2,676	0.11	0.02	—	2,685
Dust From Material Movement	—	—	—	—	—	1.38	1.38	—	0.67	0.67	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.76	0.90	< 0.005	0.04	—	0.04	0.03	—	0.03	—	147	147	0.01	< 0.005	—	147
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.3	24.3	< 0.005	< 0.005	—	24.4

Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.80	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	167	167	0.01	0.01	0.02	169
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.3	32.3	< 0.005	< 0.005	< 0.005	33.6
Hauling	0.06	3.95	1.46	0.02	0.04	0.80	0.84	0.04	0.22	0.26	—	3,040	3,040	0.16	0.49	0.18	3,189
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.30	9.30	< 0.005	< 0.005	0.02	9.43
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.77	1.77	< 0.005	< 0.005	< 0.005	1.84
Hauling	< 0.005	0.22	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	167	167	0.01	0.03	0.17	175
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.31
Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.6	27.6	< 0.005	< 0.005	0.03	29.0

### 3.7. Building Construction (2024) - Unmitigated

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

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

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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.76	3.44	0.01	0.13	—	0.13	0.12	—	0.12	—	643	643	0.03	0.01	—	646
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.50	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	107	107	< 0.005	< 0.005	—	107
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.42	6.69	0.00	0.00	1.16	1.16	0.00	0.27	0.27	—	1,252	1,252	0.05	0.04	4.94	1,271
Vendor	0.02	0.59	0.29	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	504	504	0.02	0.07	1.37	527
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.50	5.65	0.00	0.00	1.16	1.16	0.00	0.27	0.27	—	1,187	1,187	0.05	0.04	0.13	1,201
Vendor	0.01	0.62	0.30	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	504	504	0.02	0.07	0.04	526
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.25	2.93	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	594	594	0.03	0.02	1.05	602
Vendor	0.01	0.31	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	249	249	0.01	0.03	0.29	259
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.54	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.17	99.7
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.2	41.2	< 0.005	0.01	0.05	43.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.8. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



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Off-Road Equipment	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.76	3.44	0.01	0.13	—	0.13	0.12	—	0.12	—	643	643	0.03	0.01	—	646
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.50	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	107	107	< 0.005	< 0.005	—	107
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.42	6.69	0.00	0.00	1.16	1.16	0.00	0.27	0.27	—	1,252	1,252	0.05	0.04	4.94	1,271
Vendor	0.02	0.59	0.29	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	504	504	0.02	0.07	1.37	527
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.50	5.65	0.00	0.00	1.16	1.16	0.00	0.27	0.27	—	1,187	1,187	0.05	0.04	0.13	1,201
Vendor	0.01	0.62	0.30	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	504	504	0.02	0.07	0.04	526
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.25	2.93	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	594	594	0.03	0.02	1.05	602
Vendor	0.01	0.31	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	249	249	0.01	0.03	0.29	259

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.54	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.17	99.7
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.2	41.2	< 0.005	0.01	0.05	43.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.9. Paving (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	4.52	5.32	0.01	0.21	—	0.21	0.19	—	0.19	—	823	823	0.03	0.01	—	826
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.73	3.73	< 0.005	< 0.005	—	3.75

Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.12	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	234	234	0.01	0.01	0.03	237
Vendor	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.5	64.5	< 0.005	0.01	< 0.005	67.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.77	1.77	< 0.005	< 0.005	< 0.005	1.84
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.09
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.31
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.10. Paving (2024) - Mitigated

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

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

## Arapahoe Apartments at 957-967 Arapahoe Street, Los Angeles Detailed Report, 4/20/2023

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	4.52	5.32	0.01	0.21	—	0.21	0.19	—	0.19	—	823	823	0.03	0.01	—	826
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.73	3.73	< 0.005	< 0.005	—	3.75
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.12	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	234	234	0.01	0.01	0.03	237
Vendor	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.5	64.5	< 0.005	0.01	< 0.005	67.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.77	1.77	< 0.005	< 0.005	< 0.005	1.84
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.09
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.31
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.11. Architectural Coating (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectu ral Coatings	23.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectu ral Coatings	1.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.13	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	237	237	0.01	0.01	0.03	240
Vendor	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.5	64.5	< 0.005	0.01	< 0.005	67.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.54	3.54	< 0.005	< 0.005	< 0.005	3.69
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.22
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.12. Architectural Coating (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	19.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	1.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.13	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	237	237	0.01	0.01	0.03	240
Vendor	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.5	64.5	< 0.005	0.01	< 0.005	67.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.54	3.54	< 0.005	< 0.005	< 0.005	3.69
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.22
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

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

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



Apartmen ts	0.84	0.61	6.92	0.02	0.01	0.55	0.56	0.01	0.10	0.11	—	1,600	1,600	0.08	0.06	5.88	1,627
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.84	0.61	6.92	0.02	0.01	0.55	0.56	0.01	0.10	0.11	—	1,600	1,600	0.08	0.06	5.88	1,627
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	0.82	0.67	6.40	0.01	0.01	0.55	0.56	0.01	0.10	0.11	—	1,533	1,533	0.08	0.07	0.15	1,555
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.82	0.67	6.40	0.01	0.01	0.55	0.56	0.01	0.10	0.11	—	1,533	1,533	0.08	0.07	0.15	1,555
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	0.15	0.12	1.20	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	257	257	0.01	0.01	0.42	261
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.15	0.12	1.20	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	257	257	0.01	0.01	0.42	261

## 4.1.2. Mitigated

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

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

Apartment Mid Rise	0.42	0.31	3.47	0.01	0.01	0.28	0.28	< 0.005	0.05	0.05	—	803	803	0.04	0.03	2.95	816
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.42	0.31	3.47	0.01	0.01	0.28	0.28	< 0.005	0.05	0.05	—	803	803	0.04	0.03	2.95	816
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartment Mid Rise	0.41	0.34	3.21	0.01	0.01	0.28	0.28	< 0.005	0.05	0.05	—	769	769	0.04	0.03	0.08	780
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.41	0.34	3.21	0.01	0.01	0.28	0.28	< 0.005	0.05	0.05	—	769	769	0.04	0.03	0.08	780
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartment Mid Rise	0.07	0.06	0.60	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	129	129	0.01	0.01	0.21	131
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.07	0.06	0.60	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	129	129	0.01	0.01	0.21	131

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	677	677	0.05	0.01	—	680
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	169	169	0.01	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	846	846	0.06	0.01	—	850
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	677	677	0.05	0.01	—	680
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	169	169	0.01	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	846	846	0.06	0.01	—	850
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	112	112	0.01	< 0.005	—	113
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	28.1	28.1	< 0.005	< 0.005	—	28.2
Total	—	—	—	—	—	—	—	—	—	—	—	140	140	0.01	< 0.005	—	141

#### 4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	637	637	0.05	0.01	—	640
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	169	169	0.01	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	807	807	0.06	0.01	—	811
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	637	637	0.05	0.01	—	640
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	169	169	0.01	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	807	807	0.06	0.01	—	811
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	106	106	0.01	< 0.005	—	106
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	28.1	28.1	< 0.005	< 0.005	—	28.2
Total	—	—	—	—	—	—	—	—	—	—	—	134	134	0.01	< 0.005	—	134

## 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	347	347	0.03	< 0.005	—	348
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	347	347	0.03	< 0.005	—	348
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	347	347	0.03	< 0.005	—	348
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	347	347	0.03	< 0.005	—	348
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	57.4	57.4	0.01	< 0.005	—	57.6
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	57.4	57.4	0.01	< 0.005	—	57.6

## 4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	344	344	0.03	< 0.005	—	345
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	344	344	0.03	< 0.005	—	345
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	344	344	0.03	< 0.005	—	345
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	344	344	0.03	< 0.005	—	345
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	56.9	56.9	0.01	< 0.005	—	57.1
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	56.9	56.9	0.01	< 0.005	—	57.1

### 4.3. Area Emissions by Source

#### 4.3.2. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.73	0.07	7.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.9	20.9	< 0.005	< 0.005	—	20.9
Total	2.45	0.07	7.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	20.9	20.9	< 0.005	< 0.005	—	20.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.72	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consume Products	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipme nt	0.09	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.37	2.37	< 0.005	< 0.005	—	2.38
Total	0.40	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.37	2.37	< 0.005	< 0.005	—	2.38

## 4.3.1. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consume r Products	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipme nt	0.73	0.07	7.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.9	20.9	< 0.005	< 0.005	—	20.9
Total	2.42	0.07	7.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	20.9	20.9	< 0.005	< 0.005	—	20.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00



Consumer	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.69	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.37	2.37	< 0.005	< 0.005	—	2.38
Total	0.40	0.01	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.37	2.37	< 0.005	< 0.005	—	2.38

## 4.4. Water Emissions by Land Use

### 4.4.2. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	7.79	52.6	60.3	0.80	0.02	—	86.2

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.79	52.6	60.3	0.80	0.02	—	86.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	7.79	52.6	60.3	0.80	0.02	—	86.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.79	52.6	60.3	0.80	0.02	—	86.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1.29	8.70	9.99	0.13	< 0.005	—	14.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	1.29	8.70	9.99	0.13	< 0.005	—	14.3

#### 4.4.1. Mitigated

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

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

Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	5.61	37.8	43.5	0.58	0.01	—	62.1
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	5.61	37.8	43.5	0.58	0.01	—	62.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	5.61	37.8	43.5	0.58	0.01	—	62.1
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	5.61	37.8	43.5	0.58	0.01	—	62.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	0.93	6.27	7.20	0.10	< 0.005	—	10.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.93	6.27	7.20	0.10	< 0.005	—	10.3

## 4.5. Waste Emissions by Land Use

### 4.5.2. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	7.20	0.00	7.20	0.72	0.00	—	25.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.20	0.00	7.20	0.72	0.00	—	25.2

## 4.5.1. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	43.5	0.00	43.5	4.35	0.00	—	152
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	7.20	0.00	7.20	0.72	0.00	—	25.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.20	0.00	7.20	0.72	0.00	—	25.2

#### 4.6. Refrigerant Emissions by Land Use

## 4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

## 4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.7.2. Mitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

## 4.8.1. Unmitigated

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

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



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

#### 4.8.2. Mitigated

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

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

#### 4.9. User Defined Emissions By Equipment Type

##### 4.9.1. Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.9.2. Mitigated

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

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

#### 4.10. Soil Carbon Accumulation By Vegetation Type

##### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

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

#### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

## 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/8/2024	1/19/2024	5.00	10.0	—
Site Preparation	Site Preparation	1/22/2024	2/2/2024	5.00	10.0	—
Grading	Grading	2/5/2024	3/1/2024	5.00	20.0	—
Building Construction	Building Construction	3/4/2024	11/8/2024	5.00	180	—
Paving	Paving	11/11/2024	11/22/2024	5.00	10.0	—
Architectural Coating	Architectural Coating	11/25/2024	12/20/2024	5.00	20.0	—

### 5.2. Off-Road Equipment

#### 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41

Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Site Preparation	Excavators	Diesel	Average	2.00	8.00	136	0.38
Grading	Excavators	Diesel	Average	2.00	8.00	136	0.38

### 5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Tractors/Loaders/Backh oes	Diesel	Average	2.00	6.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backh oes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40



Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Site Preparation	Excavators	Diesel	Average	2.00	8.00	136	0.38
Grading	Excavators	Diesel	Average	2.00	8.00	136	0.38

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	1.00	10.2	HHDT,MHDT
Demolition	Hauling	12.7	20.0	HHDT
Demolition	Onsite truck	0.00	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	1.00	10.2	HHDT,MHDT
Site Preparation	Hauling	43.1	20.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	12.5	18.5	LDA,LDT1,LDT2
Grading	Vendor	1.00	10.2	HHDT,MHDT
Grading	Hauling	43.1	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	88.7	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	15.6	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	2.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.7	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

### 5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	1.00	10.2	HHDT,MHDT

Demolition	Hauling	12.7	20.0	HHDT
Demolition	Onsite truck	0.00	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	1.00	10.2	HHDT,MHDT
Site Preparation	Hauling	43.1	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	12.5	18.5	LDA,LDT1,LDT2
Grading	Vendor	1.00	10.2	HHDT,MHDT
Grading	Hauling	43.1	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	88.7	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	15.6	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	2.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.7	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	150,095	50,032	1,092	121	1,456

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	11,000	—
Site Preparation	—	3,446	5.00	0.00	—
Grading	—	6,892	15.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.56

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Enclosed Parking with Elevator	0.56	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	690	0.05	0.01

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMt/Weekday	VMt/Saturday	VMt/Sunday	VMt/Year
Apartments Mid Rise	247	247	247	90,312	1,988	1,988	1,988	725,777
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMt/Weekday	VMt/Saturday	VMt/Sunday	VMt/Year
Apartments Mid Rise	124	124	124	45,316	998	998	998	364,177
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0

Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	109
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

#### 5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	109
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

#### 5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
150095.025	50,032	1,092	121	1,456

## 5.10.3. Landscape Equipment

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

## 5.10.4. Landscape Equipment - Mitigated

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

## 5.11. Operational Energy Consumption

## 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	357,901	690	0.0489	0.0069	1,081,864
Enclosed Parking with Elevator	89,598	690	0.0489	0.0069	0.00

## 5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	336,958	690	0.0489	0.0069	1,072,442
Enclosed Parking with Elevator	89,598	690	0.0489	0.0069	0.00

## 5.12. Operational Water and Wastewater Consumption

## 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	4,062,844	23,758
Enclosed Parking with Elevator	0.00	0.00

## 5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,930,001	11,940
Enclosed Parking with Elevator	0.00	0.00

## 5.13. Operational Waste Generation

## 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	80.69	0.00
Enclosed Parking with Elevator	0.00	0.00

## 5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	80.69	0.00
Enclosed Parking with Elevator	0.00	0.00

## 5.14. Operational Refrigeration and Air Conditioning Equipment

## 5.14.1. Unmitigated

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

#### 5.14.2. Mitigated

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

### 5.15. Operational Off-Road Equipment

#### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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#### 5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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### 5.16. Stationary Sources

#### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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#### 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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## 5.17. User Defined

Equipment Type	Fuel Type
—	—

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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#### 5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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#### 5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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### 5.18.2. Sequestration

## 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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## 5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.60	annual days of extreme heat
Extreme Precipitation	5.70	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about  $\frac{3}{4}$  an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
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Temperature and Extreme Heat	1	0	3	1
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	3	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	3	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

### 6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	48.5
AQ-PM	87.8
AQ-DPM	85.2
Drinking Water	92.5
Lead Risk Housing	72.1
Pesticides	0.00
Toxic Releases	78.3
Traffic	72.3
Effect Indicators	—
CleanUp Sites	37.6
Groundwater	4.42
Haz Waste Facilities/Generators	4.12
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	61.9
Cardio-vascular	62.4
Low Birth Weights	16.2
Socioeconomic Factor Indicators	—

Education	89.1
Housing	97.4
Linguistic	98.9
Poverty	90.9
Unemployment	59.4

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	5.273963814
Employed	76.78686
Median HI	9.778005903
Education	—
Bachelor's or higher	24.38085461
High school enrollment	11.40767355
Preschool enrollment	27.71718209
Transportation	—
Auto Access	3.246503272
Active commuting	97.27960991
Social	—
2-parent households	31.75927114
Voting	11.79263442
Neighborhood	—
Alcohol availability	4.516874118
Park access	2.194276915
Retail density	92.30078275

Supermarket access	94.25125112
Tree canopy	34.46682921
Housing	—
Homeownership	1.167714616
Housing habitability	1.757987938
Low-inc homeowner severe housing cost burden	2.579237777
Low-inc renter severe housing cost burden	44.48864365
Uncrowded housing	0.641601437
Health Outcomes	—
Insured adults	0.423456949
Arthritis	76.8
Asthma ER Admissions	34.9
High Blood Pressure	69.1
Cancer (excluding skin)	96.0
Asthma	34.7
Coronary Heart Disease	54.4
Chronic Obstructive Pulmonary Disease	33.2
Diagnosed Diabetes	13.1
Life Expectancy at Birth	97.7
Cognitively Disabled	88.7
Physically Disabled	89.8
Heart Attack ER Admissions	63.0
Mental Health Not Good	12.4
Chronic Kidney Disease	45.1
Obesity	23.4
Pedestrian Injuries	19.6
Physical Health Not Good	9.8

Stroke	34.3
Health Risk Behaviors	—
Binge Drinking	84.3
Current Smoker	12.6
No Leisure Time for Physical Activity	6.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	22.0
Elderly	86.3
English Speaking	0.3
Foreign-born	99.6
Outdoor Workers	13.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	0.8
Traffic Density	86.8
Traffic Access	87.4
Other Indices	—
Hardship	93.1
Other Decision Support	—
2016 Voting	8.6

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	76.0
Healthy Places Index Score for Project Location (b)	9.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes



Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

Screen	Justification
Land Use	Per Design Drawings & Calculations
Construction: Construction Phases	Excavation of subterranean parking garage; larger size building
Construction: Off-Road Equipment	Excavation for subterranean parking garage
Construction: Paving	Subterranean parking garage - concrete floor
Operations: Vehicle Data	Linscott, Law & Greenspan 2022, Table 2-1 Project Trip Generation Forecast (50%)
Operations: Hearths	No Hearths

BOARD OF  
BUILDING AND SAFETY  
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DEPARTMENT OF  
BUILDING AND SAFETY  
201 NORTH FIGUEROA STREET  
LOS ANGELES, CA 90012

OSAMA YOUNAN, P.E.  
GENERAL MANAGER  
SUPERINTENDENT OF BUILDING

JOHN WEIGHT  
EXECUTIVE OFFICER

## SOILS REPORT APPROVAL LETTER

November 23, 2021

LOG # 119100-01  
SOILS/GEOLOGY FILE - 2

EL Investment, LLC  
750 Town Ave.  
Los Angeles, CA 90021

TRACT: CLARK AND BRYAN'S WESTMORELAND TRACT (M P 5-71)  
LOT(S): 42, 43 & 44  
LOCATION: 957-967 S. Arapahoe St.

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Soils Report	21-0803-1	11/05/2021	LK Geotechnical

<u>PREVIOUS REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Review Letter	119100	10/26/2021	LADBS
Soils Report	21-0803	09/22/2021	LK Geotechnical
Laboratory Testing Report	21-122-078	09/10/2021	EGLAB, Inc.

The Grading Division of the Department of Building and Safety has reviewed the referenced reports that provide recommendations for the proposed 5-story apartment building over one level of subterranean garage at the subject site. The proposed subterranean parking garage finish grade is approximately 11.5 feet below existing street grade. The earth materials at the subsurface exploration locations consist of native soils. The consultants recommend to support the proposed structure(s) on conventional or mat-type foundations bearing on native undisturbed soils.

Groundwater was not encountered during exploration to a depth of 41 feet below the existing grade and the historically highest groundwater level in the area is approximately between 20-50 feet below the ground surface, according to the consultants.

Engineering analyses provided by LK Geotechnical is based on laboratory testing performed by EGLAB, Inc. LK Geotechnical is accepting responsibility for use of the data in accordance to Code section 91.7008.5 of LABC.

The referenced reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis ( ) refer to applicable sections of the 2020 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. Approval shall be obtained from the Department of Public Works, Bureau of Engineering, Development Services and Permits Program for the proposed removal of support and/or retaining of slopes adjoining to public way (3307.3.2).

201 N. Figueroa Street 3rd Floor, LA (213) 482-7045

2. Provide a notarized letter from all adjoining property owners allowing temporary tie-back anchors on their property (7006.6).
3. The soils engineer shall review and approve the detailed plans prior to issuance of any permit. This approval shall be by signature on the plans that clearly indicates the soils engineer has reviewed the plans prepared by the design engineer; and, that the plans included the recommendations contained in their reports (7006.1).
4. All recommendations of the reports that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
5. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.
6. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).
7. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.
8. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
9. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
10. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cubic yards (7007.1).

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11. All loose foundation excavation material shall be removed prior to commencement of framing (7005.3).

12. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).
13. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be supported by shoring or constructed using ABC slot cuts, as recommended. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)
14. Where any excavation, not addressed in the approved reports, would remove lateral support (as defined in 3307.3.1) from a public way, adjacent property or structures, a supplemental report shall be submitted to the Grading Division of the Department containing recommendations for shoring, underpinning, and sequence of construction. Shoring recommendations shall include the maximum allowable lateral deflection of shoring system to prevent damage to adjacent structures, properties and/or public ways. Report shall include a plot plan and cross-section(s) showing the construction type, number of stories, and location of adjacent structures, and analysis incorporating all surcharge loads that demonstrate an acceptable factor of safety against failure. (7006.2 & 3307.3.2)
15. Prior to the issuance of any permit that authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation (3307.1).
16. The soils engineer shall review and approve the shoring plans prior to issuance of the permit (3307.3.2).
17. Prior to the issuance of the permits, the soils engineer and the structural designer shall evaluate the surcharge loads used in the report calculations for the design of the retaining walls and shoring. If the surcharge loads used in the calculations do not conform to the actual surcharge loads, the soil engineer shall submit a supplementary report with revised recommendations to the Department for approval.
18. Unsurcharged temporary excavations over 5 feet exposing soil shall be trimmed back at a gradient not exceeding 1:1, as recommended.
19. Shoring shall be designed for the lateral earth pressures specified on page 3 of the 11/05/2021 report; all surcharge loads shall be included into the design.
20. Shoring shall be designed for a maximum lateral deflection of ½ inch where a structure is within a 1:1 plane projected up from the base of the excavation, and for a maximum lateral deflection of 1 inch provided there are no structures within a 1:1 plane projected up from the base of the excavation, as recommended.
21. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.
22. ABC slot-cut method may be used for unsurcharged temporary excavations with each slot not exceeding 8 feet in height and not exceeding 8 feet in width, as recommended. The

soils engineer shall verify in the field if the existing earth materials are stable in the slot-cut excavation. Each slot shall be inspected by the soils engineer and approved in writing prior to any worker access.

23. All foundations shall derive entire support from native undisturbed soils, as recommended and approved by the soils engineer by inspection.
24. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), ½-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.
25. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2017-116 “Foundation Design for Expansive Soils” (1803.5.3).
26. Slabs placed on approved compacted fill shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.
27. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane. The slabs shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.
28. The seismic design shall be based on a Site Class D, as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check. According to ASCE 7-16 Section 11.4.8, the long period coefficient ( $F_v$ ) may be selected per Table 11.4-2 in ASCE 7-16, provided that the value of the Seismic Response Coefficient ( $C_s$ ) is determined by Equation 12.8-2 for values of the fundamental period of the building ( $T$ ) less than or equal to  $1.5T_s$ , and taken as 1.5 times the value computed in accordance with either Equation 12.8-3 for  $T$  greater than  $1.5T_s$  and less than or equal to  $T_L$  or Equation 12.8-4 for  $T$  greater than  $T_L$ . Alternatively, a supplemental report containing a site-specific ground motion hazard analysis in accordance with ASCE 7-16 Section 21.2 shall be submitted for review and approval.
29. Retaining walls shall be designed for the lateral earth pressures specified on page 2 of the 11/05/2021 report. Note: All surcharge loads shall be included into the design.
30. Retaining walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified on Plate RW-1 of the 11/05/2021 report (1803.5.12).

Note: Lateral earth pressure due to earthquake motions shall be in addition to static lateral earth pressures and other surcharge pressures.

31. Basement walls and other walls in which horizontal movement is restricted at the top shall be designed for at-rest pressure as specified on page 2 of the 11/05/2021 report (1610.1). All surcharge loads shall be included into the design.
32. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).

33. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soils report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).
34. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).
35. Basement walls and floors shall be waterproofed/damp-proofed with an LA City approved "Below-grade" waterproofing/damp-proofing material with a research report number (104.2.6).
36. Prefabricated drainage composites (Miradrain, Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.
37. Where the ground water table is lowered and maintained at an elevation not less than 6 inches below the bottom of the lowest floor, or where hydrostatic pressures will not occur, the floor and basement walls shall be damp-proofed. Where a hydrostatic pressure condition exists, and the design does not include a ground-water control system, basement walls and floors shall be waterproofed. (1803.5.4, 1805.1.3, 1805.2, 1805.3)
38. The structure shall be connected to the public sewer system per P/BC 2020-027.
39. All roof, pad and deck drainage shall be conducted to the street in an acceptable manner in non-erosive devices or other approved location in a manner that is acceptable to the LADBS and the Department of Public Works (7013.10).
40. An on-site storm water infiltration system at the subject site shall not be implemented, as recommended.
41. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
42. The soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008, 1705.6 & 1705.8).
43. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)
44. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; shoring; ABC slot cuts; protection fences; and, dust and traffic control will be scheduled (108.9.1).
45. Installation of shoring, and slot cutting shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).



46. The installation and testing of tie-back anchors shall comply with the recommendations included in the report or the standard sheets titled "Requirement for Tie-back Earth Anchors", whichever is more restrictive. Research Report #23835
47. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).
48. No footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.

LEILA ETAAT  
Structural Engineering Associate II

LE/le  
Log No. 119100-01  
213-482-0480

cc: Applicant  
LK Geotechnical, Project Consultant  
LA District Office

CITY OF LOS ANGELES  
DEPARTMENT OF BUILDING AND SAFETY  
Grading Division

District	VN	Log No.	119100-1
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APPLICATION FOR REVIEW OF TECHNICAL REPORTS

INSTRUCTIONS

- A. Address all communications to the Grading Division, LADBS, 221 N. Figueroa St., 12th Fl., Los Angeles, CA 90012  
Telephone No. (213)482-0480.
- B. Submit two copies (three for subdivisions) of reports, one "pdf" copy of the report on a CD-Rom or flash drive,  
and one copy of application with items "1" through "10" completed.
- C. Check should be made to the City of Los Angeles.

1. LEGAL DESCRIPTION	2. PROJECT ADDRESS:
Tract: <u>Clark and Bryan's Westmarland Tract</u>	<u>957-967 Argonaut St LA, 90006</u>
Block: <u>N/A</u> Lots: <u>42, 43, 44</u>	4. APPLICANT <u>Behrouz Bozorgnia</u>
3. OWNER: <u>EB Investment LLC</u>	Address: <u>11675 Picturesque Dr</u>
Address: <u>750 Towne Ave</u>	City: <u>Studio City</u> Zip: <u>91604</u>
City: <u>Los Angeles</u> Zip: <u>90021</u>	Phone (Daytime): <u>310-562-6427</u>
Phone (Daytime): _____	E-mail address: <u>admin@mobil.com</u>

5. Report(s) Prepared by: <u>LK Geotechnical</u>	6. Report Date(s): <u>11/5/21 (Response)</u>
7. Status of project: <input checked="" type="checkbox"/> Proposed <input type="checkbox"/> Under Construction <input type="checkbox"/> Storm Damage	
8. Previous site reports? <input checked="" type="checkbox"/> YES if yes, give date(s) of report(s) and name of company who prepared report(s)	<u>LK @ Geotechnical 9/22/21</u>
9. Previous Department actions? <input checked="" type="checkbox"/> YES if yes, provide dates and attach a copy to expedite processing.	
Dates: <u>10/26/21</u> <u>Soils Review Letter</u>	
10. Applicant Signature: <u>[Signature]</u>	Position: <u>Engineer of Record</u>

(DEPARTMENT USE ONLY)

REVIEW REQUESTED	FEES	REVIEW REQUESTED	FEES
<input checked="" type="checkbox"/> Soils Engineering		No. of Lots	
<input type="checkbox"/> Geology		No. of Acres	
<input type="checkbox"/> Combined Soils Engr. & Geol.		<input type="checkbox"/> Division of Land	
<input type="checkbox"/> Supplemental		Other	
<input type="checkbox"/> Combined Supplemental		<input checked="" type="checkbox"/> Expedite	90.75
<input type="checkbox"/> Import-Export Route		<input checked="" type="checkbox"/> Response to Correction	181.50
Cubic Yards: _____		<input type="checkbox"/> Expedite ONLY	
		Sub-total	272.25
		Surcharge	69.91
		TOTAL FEE	342.16

Fee Due: 342.16

Fee Verified By: Am Date: 11/17/21

(Cashier Use Only)

Receipt #  
1180504

ACTION BY:

THE REPORT IS:

☐ NOT APPROVED

☐ APPROVED WITH CONDITIONS

☐ BELOW

☐ ATTACHED

For Geology

Date

For Soils

Date

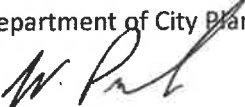


**CITY OF LOS ANGELES**  
INTER-DEPARTMENTAL CORRESPONDENCE

957-967 S Arapahoe St  
DOT Case No. CEN22-53325

Date: September 12, 2022

To: Susan Jimenez, Administrative Clerk  
Department of City Planning

From:   
Wes Pringle, Transportation Engineer  
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE PROPOSED RESIDENTIAL DEVELOPMENT  
LOCATED AT 957 – 967 SOUTH ARAPAHOE STREET (PAR-2022-5183-TOC/  
ADM-2021-2437-TOC)**

The Los Angeles Department of Transportation (LADOT) has reviewed the transportation assessment prepared by Linscott, Law & Greenspan, Engineers (LLG), dated June 30, 2022, for the proposed Arapahoe Apartments project at 957 – 967 South Arapahoe Street within the Central Area Planning Commission (APC) and a Transit Oriented Community (TOC) Tier 3. In compliance with Senate Bill (SB) 743 and the California Environmental Quality Act (CEQA), a vehicle miles traveled (VMT) analysis is required to identify the project's ability to promote the reduction of green-house gas emissions, the access to diverse land uses, and the development of multi-modal networks. The significance of a project's impact in this regard is measured against the VMT thresholds established in LADOT's Transportation Assessment Guidelines (TAG), as described below.

**DISCUSSION AND FINDINGS**

A. Project Description

The project proposes to raze a single-family residential unit and a four-unit apartment building and construct a five-story residential housing building with 109 units and residential amenities such as a sundeck, fitness center, courtyard with fire pit, multi-purpose lounge, and a common workspace area on the west side of Arapahoe Street about mid-block between San Marino Street and Olympic Boulevard. Parking for the project will be provided onsite with a total of 59 vehicular parking spaces. Parking will be accessed via a full access driveway on Arapahoe Street as illustrated in **Attachment A**. The project will also provide 90 (10 short-term and 80 long-term) bicycle parking spaces. The project is expected to be completed by 2024.

B. Freeway Safety Analysis

Per the Interim Guidance for Freeway Safety Analysis memorandum issued by LADOT on May 1, 2020 to address Caltrans safety concerns on freeways, the study addresses the project's effects on vehicle queuing on freeway off-ramps. Such an evaluation measures the project's potential to lengthen a forecasted off-ramp queue and create speed differentials between vehicles exiting the freeway off-ramps and vehicles operating on the freeway mainline. The evaluation identified the number of project trips expected to be added to nearby freeway off-ramps serving the project site. It was determined that project traffic at any freeway off-ramp will not exceed 25 peak hour trips. Therefore, a freeway ramp analysis is not required.

C. CEQA Screening Threshold

Prior to accounting for trip reductions resulting from the application of Transportation Demand Management (TDM) Strategies, a trip generation analysis was conducted to determine if the project would exceed the net 250 daily vehicle trips screening threshold. Using the City of Los Angeles VMT Calculator tool, which draws upon trip rate estimates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9<sup>th</sup> Edition as well as applying trip generation adjustments when applicable, based on sociodemographic data and the built environment factors of the project's surroundings, it was determined that the project **does** exceed the net 250 daily vehicle trips threshold.

Additionally, the analysis included further discussion of the transportation impact thresholds:

- T-1 Conflicting with plans, programs, ordinances, or policies
- T-2.1 Causing substantial vehicle miles traveled
- T-3 Substantially increasing hazards due to a geometric design feature or incompatible use.

The assessment determined that the project would **not** have a significant transportation impact under Thresholds T-1 and T-3. A project's impacts per Threshold T-2.1 is determined by using the VMT calculator and is discussed further below. A copy of the VMT Calculator summary report is provided as **Attachment B** to this report.

D. Transportation Impacts

On July 30, 2019, pursuant to SB 743 and the recent changes to Section 15064.03 of the State's CEQA Guidelines, the City of Los Angeles adopted VMT as criteria in determining transportation impacts under CEQA. The LADOT TAG provide instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds.

The LADOT VMT Calculator tool measures project impact in terms of Household VMT per Capita, and Work VMT per Employee. LADOT identified distinct thresholds for significant VMT impacts for each of the seven APC areas in the City. For the Central Los Angeles APC area, in which the project is located, the following thresholds have been established:

- Household VMT per Capita: 6.0
- Work VMT per Employee: 7.6

As cited in the VMT Analysis report prepared by LLG, the proposed project is projected to have a Household VMT per capita of 5.5 and no Work VMT. Therefore, it is concluded that implementation of the project would result in no significant VMT impact. A copy of the VMT Calculator summary report is provided as **Attachment B**.

E. Access and Circulation

During preparation of the new CEQA guidelines, the State's Office of Planning and Research stressed that lead agencies can continue to apply traditional operational analysis requirements to inform land use decisions provided that such analyses were outside of the CEQA process. The authority for requiring non-CEQA transportation analysis and requiring improvements to address potential circulation deficiencies, lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the LAMC. Therefore, LADOT continues to require and review a project's site access, circulation, and operational plan to determine if any access

enhancements, transit amenities, intersection improvements, traffic signal upgrades, neighborhood traffic calming, or other improvements are needed. In accordance with this authority, the project has completed a circulation analysis using a “level of service” screening methodology that indicates that the trips generated by the proposed development will not likely result in adverse circulation conditions at several locations. Vehicular access to the project will be provided along Arapahoe Street. LADOT has reviewed this analysis and determined that it adequately discloses operational concerns. A copy of the circulation analysis table that summarizes these potential deficiencies is provided as **Attachment C** to this report.

## PROJECT REQUIREMENTS

### Non-CEQA-Related Requirements and Considerations

To comply with transportation and mobility goals and provisions of adopted City plans and ordinances, the applicant should be required to implement the following:

1. Parking Requirements

The project would provide parking for 59 vehicles and 90 bicycles. The applicant should check with the Departments of Building and Safety and City Planning on the number of parking spaces required for this project within a TOC Tier 3.

2. Highway Dedication and Street Widening Requirements

Per the new Mobility Element of the General Plan, **Arapahoe Street**, a Local Street, would require an 18-foot half-width roadway within a 30-foot half-width right-of-way. The applicant should coordinate with the Bureau of Engineering’s Land Development Group who will determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

3. Project Access and Circulation

The conceptual site plan for the project (see **Attachment A**) is acceptable to LADOT. The project would be accessed via a full access driveway on Arapahoe Street. Review of this study does not constitute approval of the dimensions for any new proposed driveway. Review and approval of new driveways should be coordinated with LADOT’s Citywide Planning Coordination Section (201 North Figueroa Street, 5<sup>th</sup> Floor, Room 550, at 213-482-7024). In order to minimize and prevent last minute building design changes, the applicant should contact LADOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design. The applicant should check with City Planning regarding the project’s vehicular access and design.

4. Worksite Traffic Control Requirements

LADOT recommends that a construction work site traffic control plan be submitted to LADOT’s Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of any construction work. Refer to <http://ladot.lacity.org/businesses/temporary-traffic-control-plans> to determine which section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. LADOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

5. TDM Ordinance Requirements

The TDM Ordinance (LAMC 12.26 J) is currently being updated. The updated ordinance, which is currently progressing through the City's approval process, will:

- Expand the reach and application of TDM strategies to more land uses and neighborhoods,
- Rely on a broader range of strategies that can be updated to keep pace with technology, and
- Provide flexibility for developments and communities to choose strategies that work best for their neighborhood context.

Although not yet adopted, LADOT recommends that the applicant be subject to the terms of the proposed TDM Ordinance update. The updated ordinance is expected to be completed prior to the anticipated construction of this project, if approved.

6. Development Review Fees

Section 19.15 of the LAMC identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Eileen Hunt or my staff at (213) 972-8481.

Attachments

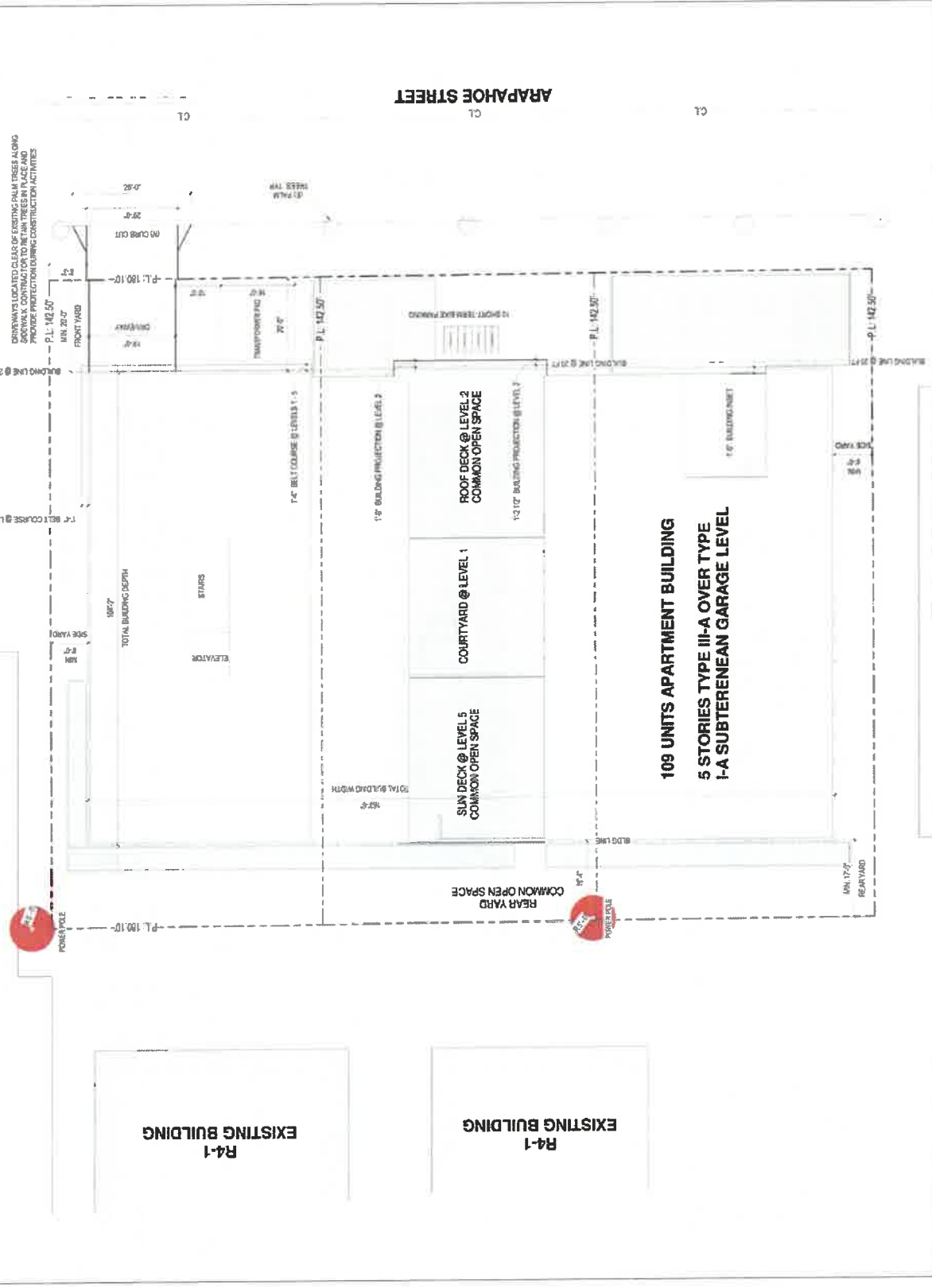
*K:\Letters\2022\CEN22-53325\_957-967 Arapahoe\_Residential\_ltr.docx*

c: Gerald Gubatan, Council District 1  
Hokchi Chiu, Central District, BOE  
Kaylinn Pell, Central District, DOT  
Taimour Tanavoli, Case Management Office, DOT  
Chin Taing, LLG

**R4-1  
EXISTING BUILDING**

R4-1

## EXISTING BUILDING



SOURCE: MOBBIL



Figure 2-3  
Ground Floor Site Plan

# CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

## Project Information

Project:

Scenario:

Address:



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☒ Yes ☐ No

## Existing Land Use

Land Use Type	Value	Unit
Housing   Single-Family	1	DU
Housing   Multi-Family	4	DU

Click here to add a single custom land use type (will be included in the above list)

## Proposed Project Land Use

Land Use Type	Value	Unit
Housing   Multi-Family	109	DU

Click here to add a single custom land use type (will be included in the above list)

## Project Screening Summary

Existing Land Use	Proposed
23 Daily Vehicle Trips	445 Daily Vehicle Trips
144 Daily VMT	2,792 Daily VMT
Tier 1 Screening Criteria	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station.	
Tier 2 Screening Criteria	
The net increase in daily trips < 250 trips	422 Net Daily Trips
The net increase in daily VMT ≤ 0	2,648 Net Daily VMT
The proposed project consists of only retail land uses 50,000 square feet total.	0.000 ksf
The proposed project is required to perform VMT analysis.	

# CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



## Project Information

Project:   
Scenario:   
Address:



Proposed Project Land Use Type: Housing | Multi-Family  
Value: 109  
Unit: DU

## TDM Strategies

Select each section to show individual strategies  
Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

Max Home Based TDM Achieved? ☐ No ☐ No  
Max Work Based TDM Achieved? ☐ No ☐ No

**A** **Parking**

☐ Reduce Parking Supply ☐ city code parking provision for the project site  
☐ Proposed Prj ☐ Mitigation ☐ No ☐ No

☐ Unbundle Parking ☐ actual parking provision for the project site  
☐ Proposed Prj ☐ Mitigation ☐ No ☐ No

☐ Parking Cash-Out ☐ monthly parking cost (dollar) for the project site  
☐ Proposed Prj ☐ Mitigation ☐ No ☐ No

☐ Price Workplace Parking ☐ percent of employees eligible  
☐ Proposed Prj ☐ Mitigation ☐ No ☐ No

☐ Residential Area Parking ☐ daily parking charge (dollar)  
☐ Proposed Prj ☐ Mitigation ☐ No ☐ No

☐ Permits ☐ percent of employees subject to priced parking  
☐ Proposed Prj ☐ Mitigation ☐ No ☐ No

☐ cost (dollar) of annual permit

**B** **Transit**

**C** **Education & Encouragement**

**D** **Commute Trip Reductions**

**E** **Shared Mobility**

**F** **Bicycle Infrastructure**

**G** **Neighborhood Enhancement**

## Analysis Results

Proposed Project	With Mitigation
445 Daily Vehicle Trips	445 Daily Vehicle Trips
2,792 Daily VMT	2,792 Daily VMT
5.5 Household VMT per Capita	5.5 Household VMT per Capita
N/A Work VMT per Employee	N/A Work VMT per Employee

### Significant VMT Impact?

Household: No

Threshold = 6.0  
15% Below APC

Work: N/A

Threshold = 7.6  
15% Below APC

Household: No

Threshold = 6.0  
15% Below APC

Work: N/A

Threshold = 7.6  
15% Below APC





# CITY OF LOS ANGELES VMT CALCULATOR

## Report 1: Project & Analysis Overview

Date: June 29, 2022  
 Project Name: Arapahoe Apartments  
 Project Scenario:  
 Project Address: 957 S ARAPAHOE ST, 90006



Version 1.3

Project Information		
Land Use Type	Value	Units
Housing	Single Family	0
	Multi Family	109
	Townhouse	0
	Hotel	0
	Motel	0
Affordable Housing	Family	0
	Senior	0
	Special Needs	0
	Permanent Supportive	0
	General Retail	0
Retail	Furniture Store	0.000
	Pharmacy/Drugstore	0.000
	Supermarket	0.000
	Bank	0.000
	Health Club	0.000
	High-Turnover Sit-Down Restaurant	0.000
	Fast-Food Restaurant	0.000
	Quality Restaurant	0.000
	Auto Repair	0.000
	Home Improvement	0.000
Office	Free-Standing Discount	0.000
	Movie Theater	0
	General Office	0.000
	Medical Office	0.000
	Light Industrial	0.000
Industrial	Manufacturing	0.000
	Warehousing/Self-Storage	0.000
	University	0
School	High School	0
	Middle School	0
	Elementary	0
	Private School (K-12)	0
Other		0
Trips		0



# CITY OF LOS ANGELES VMT CALCULATOR

## Report 1: Project & Analysis Overview

Date: June 29, 2022

Project Name: Arapahoe Apartments

Project Scenario:

Project Address: 957 S ARAPAHOE ST, 90006



Version 1.3

Analysis Results				
Total Employees: 0				
Total Population: 246				
Proposed Project		With Mitigation		
445	Daily Vehicle Trips	445	Daily Vehicle Trips	
2,792	Daily VMT	2,792	Daily VMT	
5.5	Household VMT per Capita	5.5	Household VMT per Capita	
N/A	Work VMT per Employee	N/A	Work VMT per Employee	
Significant VMT Impact?				
APC: Central				
Impact Threshold: 15% Below APC Average				
Household = 6.0				
Work = 7.6				
Proposed Project		With Mitigation		
VMT Threshold	Impact	VMT Threshold	Impact	
Household > 6.0	No	Household > 6.0	No	
Work > 7.6	N/A	Work > 7.6	N/A	

# CITY OF LOS ANGELES VMT CALCULATOR

## Report 4: MXD Methodology

Date: June 29, 2022  
 Project Name: Arapahoe Apartments  
 Project Scenario:  
 Project Address: 957 S ARAPAHOE ST, 90006



Version 1.3

### MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	98	-19.4%	79	7.7	755	608
Home Based Other Production	271	-48.0%	141	5.3	1,436	747
Non-Home Based Other Production	126	-4.0%	121	7.5	945	908
Home-Based Work Attraction	0	0.0%	0	7.6	0	0
Home-Based Other Attraction	129	-42.6%	74	4.8	619	355
Non-Home Based Other Attraction	31	-3.2%	30	5.8	180	174

### MXD Methodology with TDM Measures

	Proposed Project			Project with Mitigation Measures		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	0.0%	79	608	0.0%	79	608
Home Based Other Production	0.0%	141	747	0.0%	141	747
Non-Home Based Other Production	0.0%	121	908	0.0%	121	908
Home-Based Work Attraction	0.0%	0	0	0.0%	0	0
Home-Based Other Attraction	0.0%	74	355	0.0%	74	355
Non-Home Based Other Attraction	0.0%	30	174	0.0%	30	174

### MXD VMT Methodology Per Capita & Per Employee

Total Population: 246  
 Total Employees: 0  
 APC: Central

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	1,355	1,355
Total Home Based Work Attraction VMT	0	0
Total Home Based VMT Per Capita	5.5	5.5
Total Work Based VMT Per Employee	N/A	N/A

Table 5-2  
SUMMARY OF VEHICLE QUEUING [1]  
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	MOVEMENT	PEAK HOUR	95th PERCENTILE QUEUES (FEET PER LANE) [2]			CHANGE IN QUEUE [3]
					EXISTING	YEAR 2024 FUTURE W/O PROJECT	YEAR 2024 FUTURE W/ PROJECT	
1	Elden Avenue/ Olympic Boulevard	Signalized	EB Left	AM	5	5	5	0
				PM	8	8	8	0
			WB Left	AM	3	5	5	0
				PM	25	33	33	0
2	Arapahoe Street/ San Marino Street	Unsignalized	NB Left/Right	AM	8	8	10	2
				PM	5	8	8	0
			EB Thru/Right	AM	0	0	0	0
				PM	0	0	0	0
			WB Thru/Left	AM	3	3	3	0
				PM	3	3	3	0
3	Arapahoe Street/ Olympic Boulevard	Unsignalized	EB Left	AM	3	5	5	0
				PM	5	8	8	0
			WB Left	AM	30	38	38	0
				PM	25	33	33	0
4	Hoover Street/ Olympic Boulevard	Signalized	NB Left	AM	120	128	133	5
				PM	185	198	215	17
			SB Left	AM	778	943	943	0
				PM	763	875	875	0
			EB Left	AM	310	360	360	0
				PM	230	305	305	0
			WB Left	AM	70	73	73	0
				PM	80	80	80	0

- [1] Pursuant to LADOT's *Transportation Assessment Guidelines*, July 2020, the Highway Capacity Manual (HCM) methodology for signalized and unsignalized study intersections was utilized to calculate vehicle queuing.
- [2] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The HCM 6th Edition methodology worksheets report queues in number of vehicles per lane, however an average vehicle length of 25 feet was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet per lane.
- [3] Represents the change in calculated maximum back of queue (in feet per lane) due to the addition of project-related traffic.



TRANSPORTATION ASSESSMENT REPORT  
**ARAPAHOE APARTMENTS PROJECT**

City of Los Angeles, California  
June 30, 2022

*Prepared for:*

**Mobbil**

11675 Picturesque Drive  
Los Angeles, California 91604

LLG Ref. 1-22-4472-1



*Prepared by:*

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Chin S. Taing, PTP, RSP1  
Senior Transportation Planner

*Under the Supervision of:*

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#### APPENDIX

- A. Transportation Assessment Memorandum of Understanding
- B. Count Data
- C. VMT Calculator Data
- D. Synchro Analysis Data Worksheets – Weekday AM and PM Peak Hours

# TRANSPORTATION ASSESSMENT REPORT ARAPAHOE APARTMENTS PROJECT

City of Los Angeles, California

June 30, 2022

## 1.0 INTRODUCTION

### 1.1 Transportation Assessment Overview

This transportation assessment report has been prepared to identify and evaluate the potential transportation impacts of the proposed Arapahoe Apartments project (“proposed project” herein) on the surrounding transportation system. The proposed project site is located at 957-967 Arapahoe Street in the Wilshire Community Plan area of the City of Los Angeles, California. The proposed project site is generally bounded by Arapahoe Street to the east and existing multi-family residential housing to the north, south and west. The proposed Arapahoe Apartments project and general vicinity are shown in *Figure 1-1*.

The transportation assessment follows City of Los Angeles (“City”) transportation assessment guidelines<sup>1</sup> (TAG). The City’s TAG are focused on transportation metrics that promote: the reduction of greenhouse gas emissions, the development of multimodal networks and access to diverse land uses, as well as safety, sustainability and smart growth. In compliance with the California Environmental Quality Act (CEQA), the City’s TAG identifies vehicle miles traveled (VMT) as the primary metric for evaluating a project’s significant transportation impacts along with whether the proposed project conflicts or is inconsistent with local plans and policies. In addition, the City’s TAG require evaluation of non-CEQA mobility elements such as pedestrian, bicycle and transit access, project access and circulation, project construction, and the potential for residential street intrusion.

This transportation assessment (i) presents a CEQA assessment of project-related VMT, (ii) provides a CEQA assessment of whether the project conflicts or is inconsistent with local plans and policies, (iii) presents a non-CEQA assessment of pedestrian, bicycle and transit access, (iv) provides a non-CEQA evaluation of project access, safety and circulation, (v) provides a non-CEQA review of project construction activities, and (vi) recommends mitigation and improvement measures, where necessary.

### 1.2 Study Methodology

The CEQA and non-CEQA analysis criteria for this transportation assessment were identified in consultation with City of Los Angeles Department of Transportation (LADOT) staff. The analysis criteria were determined based on the City’s TAG, the proposed project description and location, and the characteristics of the surrounding transportation system. As defined by the City as Lead Agency

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<sup>1</sup> *Transportation Assessment Guidelines*, City of Los Angeles Department of Transportation, July 2020.

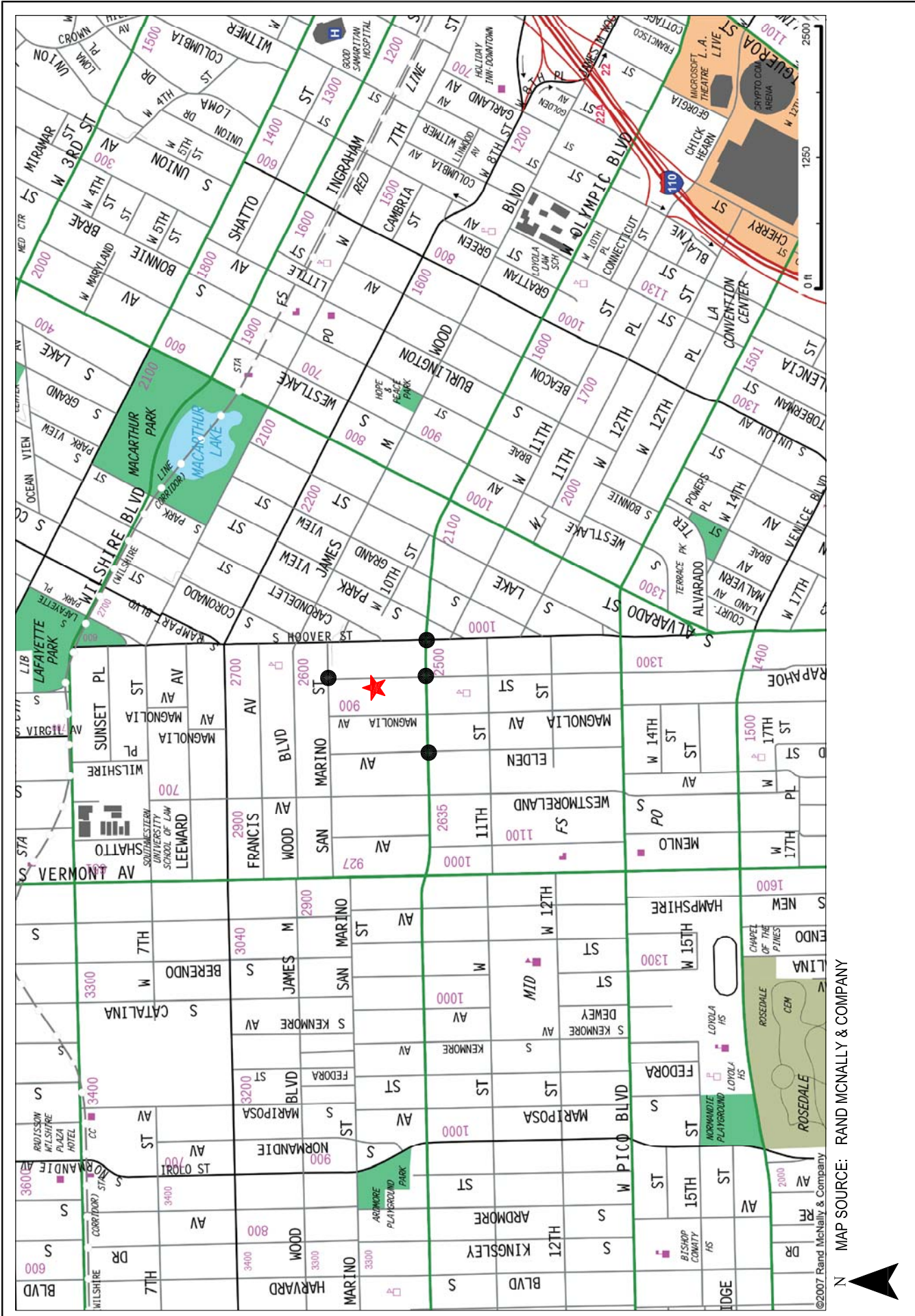


Figure 1-1  
Vicinity Map

★ Project Site  
● Study Intersection



under CEQA, LADOT confirmed the appropriateness of the analysis criteria when it entered into a transportation assessment Memorandum of Understanding (MOU) for the proposed project. The approved transportation assessment MOU and the screening criteria set forth in the TAG are attached to this report in *Appendix A*.

## 2.0 PROJECT DESCRIPTION

### 2.1 Project Location

The proposed project site is located at 957-967 Arapahoe Street in the Wilshire Community Plan area of the City of Los Angeles, California. The proposed project site is generally bounded by Arapahoe Street to the east and existing multi-family residential housing to the north, south and west. The proposed Arapahoe Apartments project and general vicinity are shown in *Figure 1-1*.

The project site is situated along the west side of Arapahoe Street approximately mid-way between San Marino Street to the north and Olympic Boulevard to the south. The project site is approximately 25,658 square feet and consists of three lots, with one currently vacant and the remaining two lots are occupied by one single-family residential unit and a four-unit apartment building. The existing residential uses will be razed in order to accommodate construction of the proposed project. It is noted that the existing site currently provides three driveways on Arapahoe Street for access to these lots. The Arapahoe Apartments project site is highlighted in an aerial photograph presented in *Figure 2-1*.

The Wilshire Community Plan<sup>2</sup> area comprises approximately 14 square miles and known often as the Mid-City section of the City of Los Angeles. The Community area is generally bounded by Melrose Avenue and Rosewood Avenue to the north; 18th Street, Venice Boulevard and Pico Boulevard to the south; Hoover Street to the east; and the Cities of West Hollywood and Beverly Hills to the west. The Wilshire Community Plan area is surrounded by the City of Los Angeles community plan areas of Hollywood to the north; South Central Los Angeles and West Adams Leimert-Baldwin Hills to the south; Silverlake-Echo Park and Westlake to the east; and West Los Angeles to the west. Refer to *Figure 2-2* which shows the Wilshire Community Plan area.

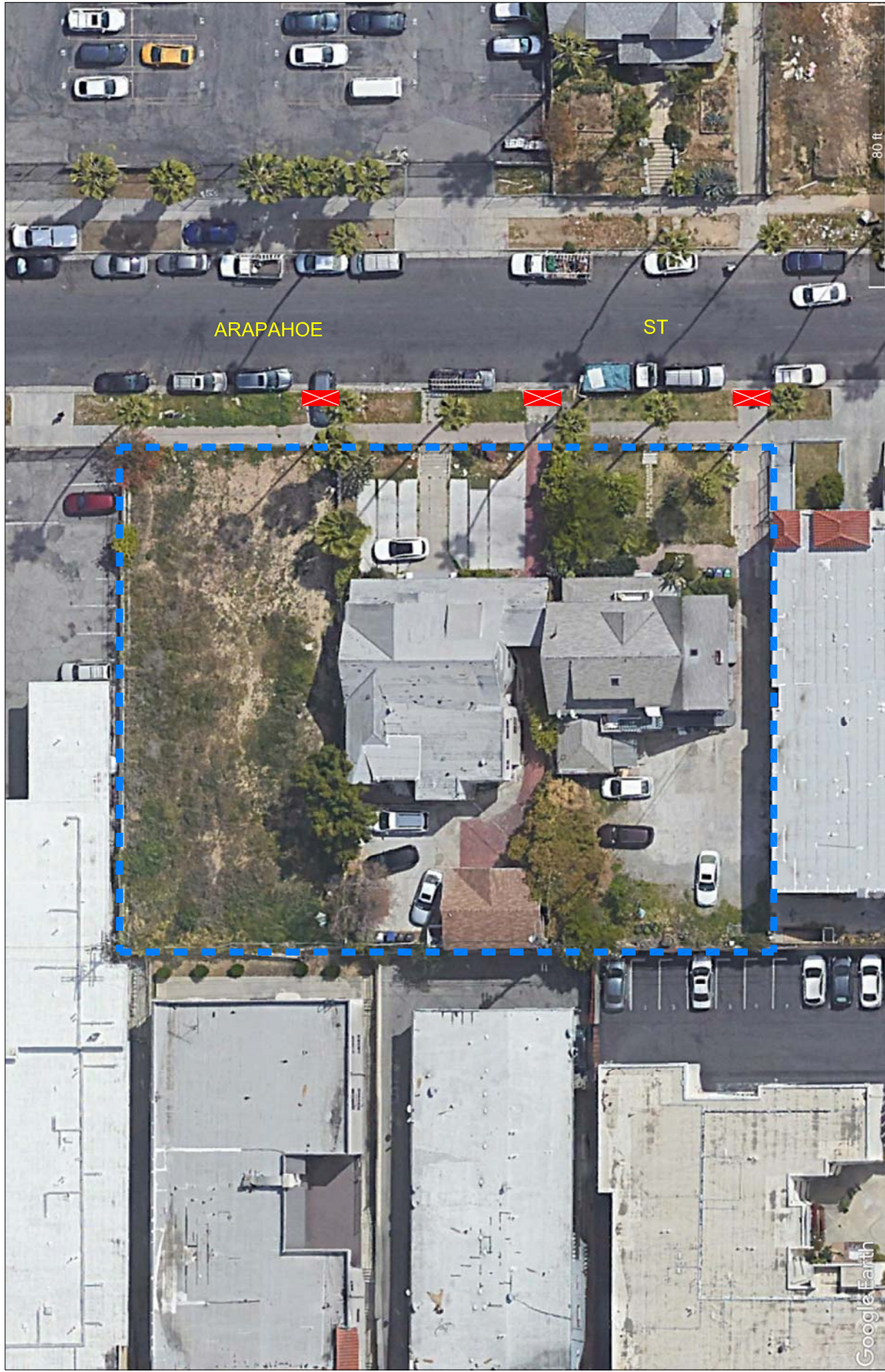
### 2.2 Proposed Project Description

The proposed project consists of the development of a five-story multi-family residential housing building planned to contain a total of 109 units. The residential unit mix will consist of 103 studios/one-bedroom units, 4 two-bedroom units, and 2 four-bedroom units. The residential building will contain various residential amenities for the use by the residents and their guests, such as a sundeck, fitness center, courtyard with fire pit, multi-purpose lounge, and common workspace area. The proposed project is planned to provide a total of 59 vehicular parking spaces, including three handicap accessible spaces, four compact spaces, 18 electric vehicle (EV) spaces, along with bicycle storage and general storage areas in a subterranean parking garage level. The planned vehicular parking supply complies with the project per the City of Los Angeles Transit Oriented Communities (TOC) guidelines requirement of 0.5 spaces per unit ( $109 \times 0.5 = 55$  spaces) with no vehicle parking reduction by bicycle parking offset. Also, a total of 90 bicycle parking spaces including 80 long-term and 10 short-term bicycle parking spaces is planned to be provided in compliance with the requirements set forth in the Los Angeles Municipal Code (i.e., 80 long-term spaces required, 8

---

<sup>2</sup> Source: *Westwood Community Plan*; A Part of the General Plan-City of Los Angeles; <http://cityplanning.cityofla.org>.





N MAP SOURCE: GOOGLE EARTH PRO

Project Site

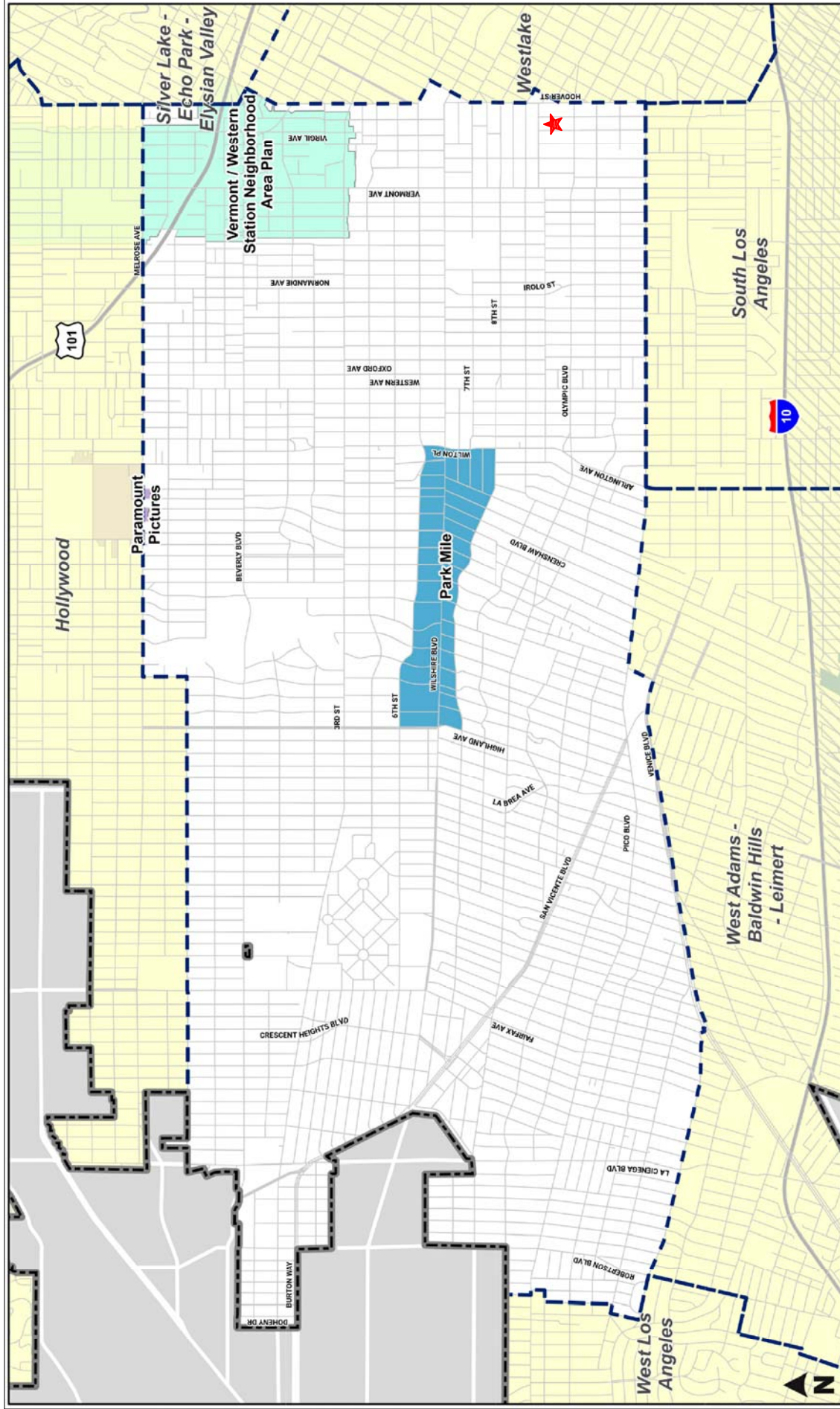
Existing Driveway



Figure 2-1  
Aerial Photograph of Existing Project Site



o:\job\_files\4472\dwg\12-2.dwg 06/17/2022 13:42:39 rodriguez - - - -



N MAP SOURCE: LOS ANGELES CITY PLANNING SPECIFIC PLAN AREAS

★ Project Site



Figure 2-2  
Wilshire Community Plan Area

short-term spaces required). Construction of the proposed project is expected to commence in year 2022 with occupancy in the year 2024 (i.e., project build-out year 2024). The ground floor site plan for the proposed project is displayed in **Figure 2-3**. The subterranean garage floor site plan for the proposed project is displayed in **Figure 2-4**.

## **2.3 Vehicular Project Site Access**

As indicated in *Figures 2-3 and 2-4*, vehicular access to the proposed project site is planned to be located on Arapahoe Street (i.e., the easterly property frontage) at the northeast corner of the project site. The project site driveway will provide a focused vehicular access point that accesses the subterranean parking garage at the site. It is anticipated that the planned project site vehicular driveway on Arapahoe Street would continue to accommodate full access (i.e., right-turn and left-turn ingress and egress movements) for motorists accessing the project site. The planned project site driveway will be constructed to City of Los Angeles design standards.

### **2.3.1 Vehicular Site Access Recommendations**

The following traffic management measures are recommended to facilitate access to and from the project site:

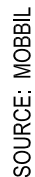
- Install appropriate pavement markings (i.e., stop bar with STOP legend) on the project site exit drive aisle just west of the public sidewalks along Arapahoe Street to ensure that motorists stop prior to the sidewalk before exiting the site.
- Install a “STOP” sign facing exiting driveway motorists to enforce the pavement markings.

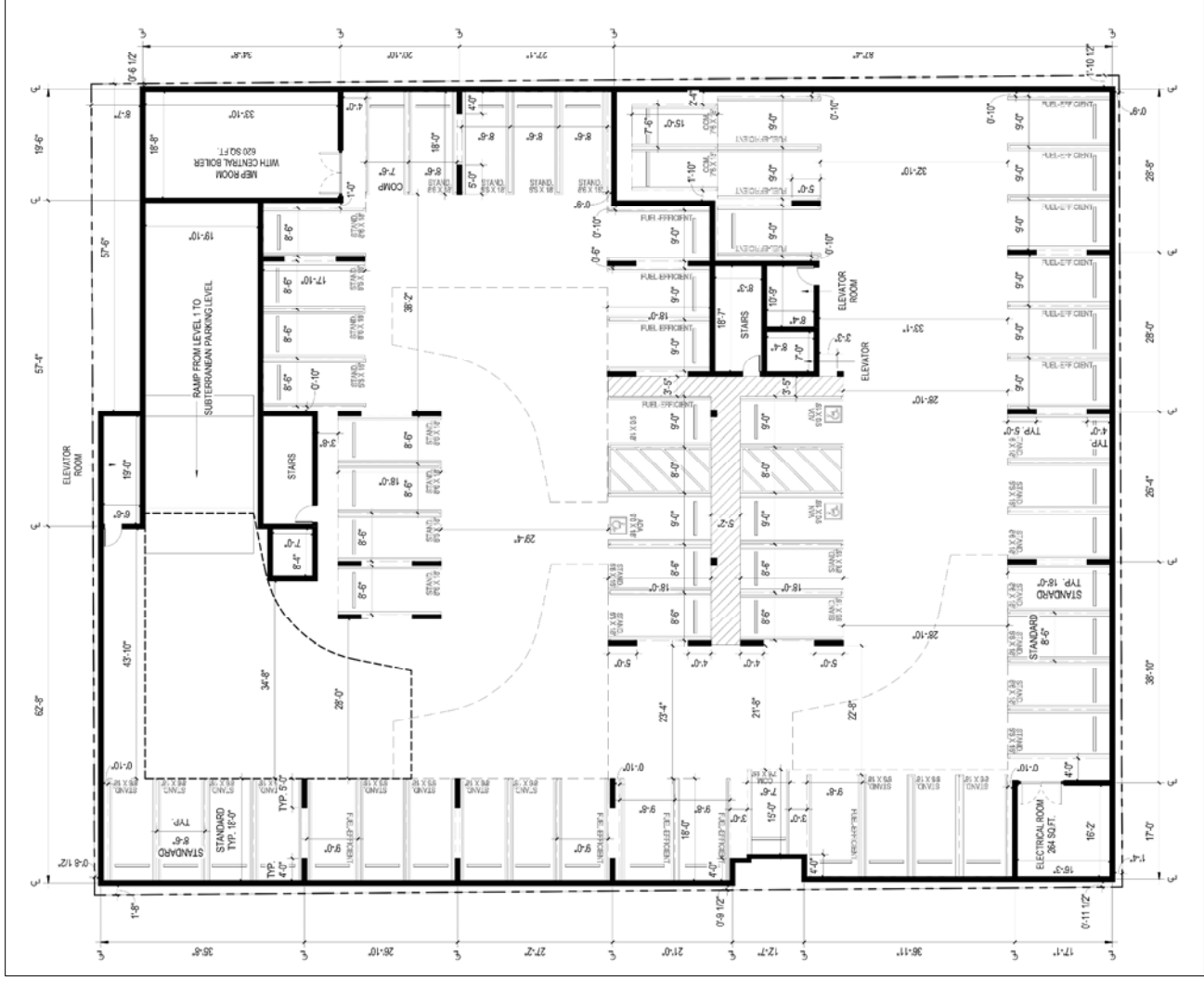
## **2.4 Project Parking**

A total of 59 vehicle parking spaces is planned to be provided within the subterranean parking garage, including 34 standard spaces, four (4) compact spaces, 18 electric vehicle spaces, and three (3) Americans with Disabilities Act (ADA) parking spaces. The planned vehicular parking supply complies with the project per the City of Los Angeles TOC guidelines requirement of 0.5 spaces per unit ( $109 \times 0.5 = 55$  spaces) with no vehicle parking reduction by bicycle parking offset.

Use of bicycles as a transportation mode to and from the project site will be encouraged by the provision of ample and safe bicycle parking (refer to Los Angeles Municipal Code Section 12.21). As indicated in *Figure 2-4*, a bicycle storage area will be provided in a readily accessible location on Level 1 north of the multi-purpose lounge and workspace area. Appropriate lighting will be provided to increase safety and provide theft deterrent during night-time parking. Further, a total of 90 bicycle parking spaces including 80 long-term and 10 short-term bicycle parking spaces are planned to be provided in compliance with the requirements set forth in the Los Angeles Municipal Code (i.e., 80 long-term spaces required, 8 short-term spaces required).







SOURCE: MOBIL

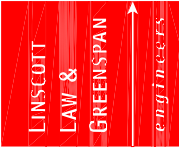


Figure 2-4  
Subterranean Garage Floor Site Plan

## 2.5 Project Loading

Loading activities associated with service and delivery operations, trash collection and waste management will be accommodated via Arapahoe Street in a manner similar to that which occurs for the existing site. Curbside loading/unloading will continue to take place along Arapahoe Street by future residents for purposes of move-in/move-out loading activities.

## 2.6 Project Trip Generation and Distribution

As noted previously, a non-CEQA transportation analysis is required pursuant to the City's current *Transportation Assessment Guidelines*. For operational evaluation of land use projects, the City's TAG requires a quantitative evaluation of the project's expected access and circulation operations. In order to estimate the proposed project's effect on intersection operations, a multi-step forecasting process has been utilized to determine the project trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis, and the project trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes, as described in the following section.

### 2.6.1 Project Trip Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours. Generation rates provided in the Transportation Engineers' (ITE) *Trip Generation Manual*<sup>3</sup> were utilized to forecast project traffic generation for the proposed project residential land use component. ITE Land Use Code 221 (Multi-Family Housing) and Land Use Code 210 (Single-Family Detached Housing) trip generation average rates were used to forecast the traffic volumes expected to be generated by the proposed project and existing site single-family residential land use, respectively.

The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in **Table 2-1**. As summarized in *Table 2-1*, the proposed project is expected to generate a net increase of 37 vehicle trips (9 inbound trips and 28 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate a net increase of 40 vehicle trips (24 inbound trips and 16 outbound trips).

### 2.6.2 Project Trip Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Olympic Boulevard, Hoover Street, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;

---

<sup>3</sup> Institute of Transportation Engineers *Trip Generation Manual*, 11<sup>th</sup> Edition, Washington, D.C., 2021.

**Table 2-1  
PROJECT TRIP GENERATION FORECAST**

TRIP GENERATION RATES [1]									
ITE LAND USE CATEGORY	ITE LAND USE CODE	VARIABLE	WEEKDAY DAILY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
				IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Multifamily Housing (Mid Rise) [Not Close to Rail] [3]	221	Per Dwelling Unit	4.54	23%	77%	0.37	61%	39%	0.39
Single-Family Detached Housing [4]	210	Per Dwelling Unit	9.43	26%	74%	0.70	63%	37%	0.94
Multifamily Housing (Low Rise) [Not Close to Rail] [3]	220	Per Dwelling Unit	6.74	24%	76%	0.40	63%	37%	0.51

PROJECT TRIP GENERATION FORECAST									
LAND USE	ITE LAND USE CODE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				IN	OUT	TOTAL	IN	OUT	TOTAL
<u>Proposed Project</u>									
Apartments [3]	221	109 DU	495	9	31	40	26	17	43
<u>Subtotal Proposed Project</u>			495	9	31	40	26	17	43
<u>Existing Uses</u>									
Single-Family Residential [4]	210	(1) DU	(9)	0	(1)	(1)	(1)	0	(1)
Apartment	220	(4) DU	(27)	0	(2)	(2)	(1)	(1)	(2)
<u>Subtotal Existing Uses</u>			(36)	0	(3)	(3)	(2)	(1)	(3)
<u>NET NEW PROJECT TRIPS</u>			459	9	28	37	24	16	40

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 221 Multifamily Housing (Mid-Rise) trip generation average rates for General Urban/Suburban area.

[4] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates for General Urban/Suburban area.

[5] ITE Land Use Code 220 Multifamily Housing (Low-Rise) trip generation average rates for General Urban/Suburban area.

- Existing intersection traffic volumes;
- Existing site parcel access ingress/egress schemes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from LADOT staff.

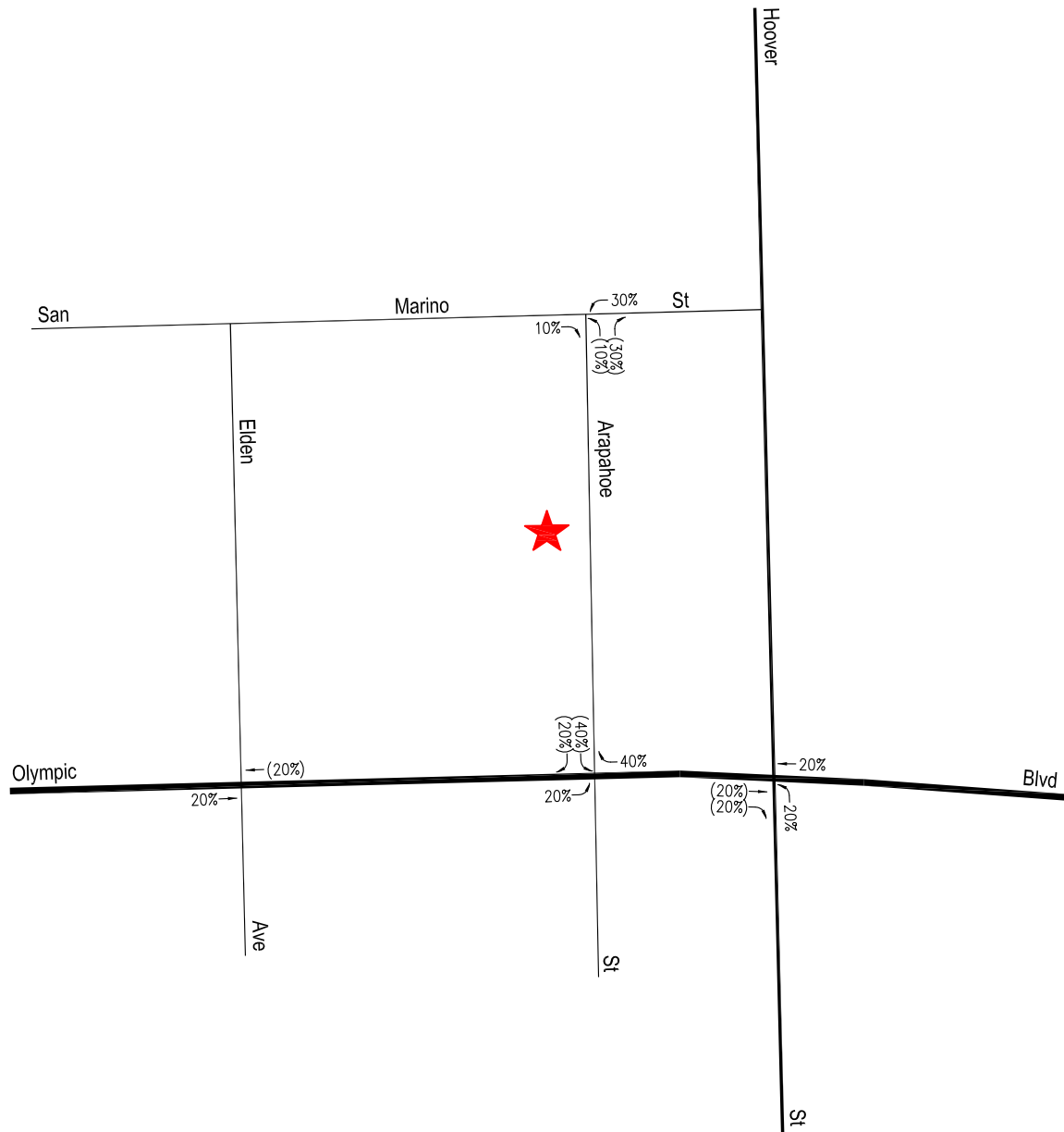
The general, directional traffic distribution pattern for the proposed project is presented in **Figure 2-5**. The forecast net new weekday AM and PM peak hour project traffic volumes at the study intersections associated with the proposed project are presented in **Figures 2-6** and **2-7**, respectively. The traffic volume assignments presented in **Figures 2-6** and **2-7** reflect the traffic distribution characteristics shown in **Figure 2-5** and the project traffic generation forecasts presented in **Table 2-1**.

## **2.7 Project Transportation Demand Management Features**

The project applicant will install and maintain a transportation information display kiosk in a common area at the project site that displays the following in order to facilitate and encourage use of public transportation:

- Maps, routes, and schedules for public transit serving the site.
- Materials publicizing internet and telephone numbers for referrals on transportation information.
- Ridesharing promotional material supplied by Metro and/or other publicly supported transportation organizations.

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Project Site

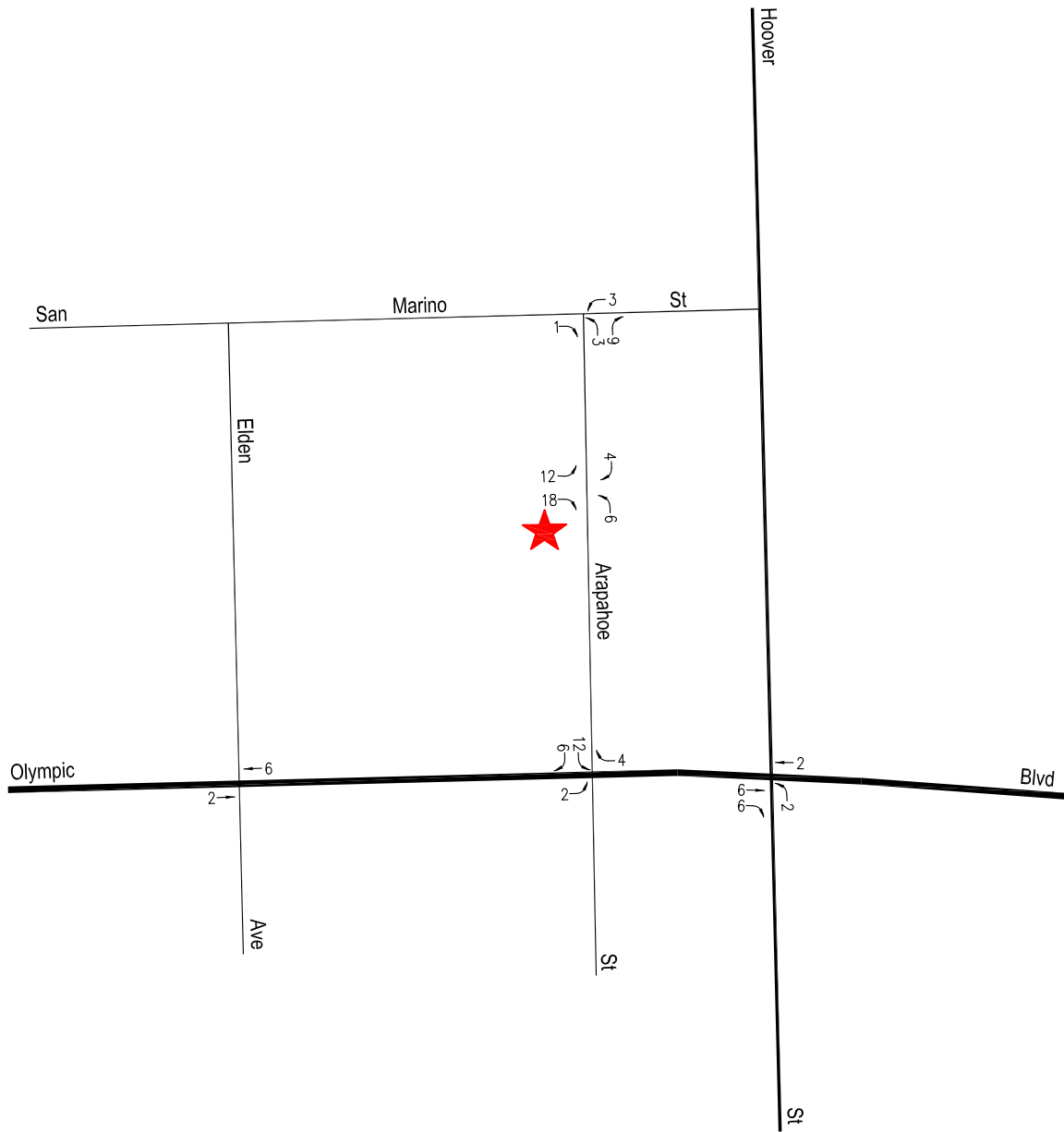
XX = Inbound Percentage

(XX) = Outbound Percentage

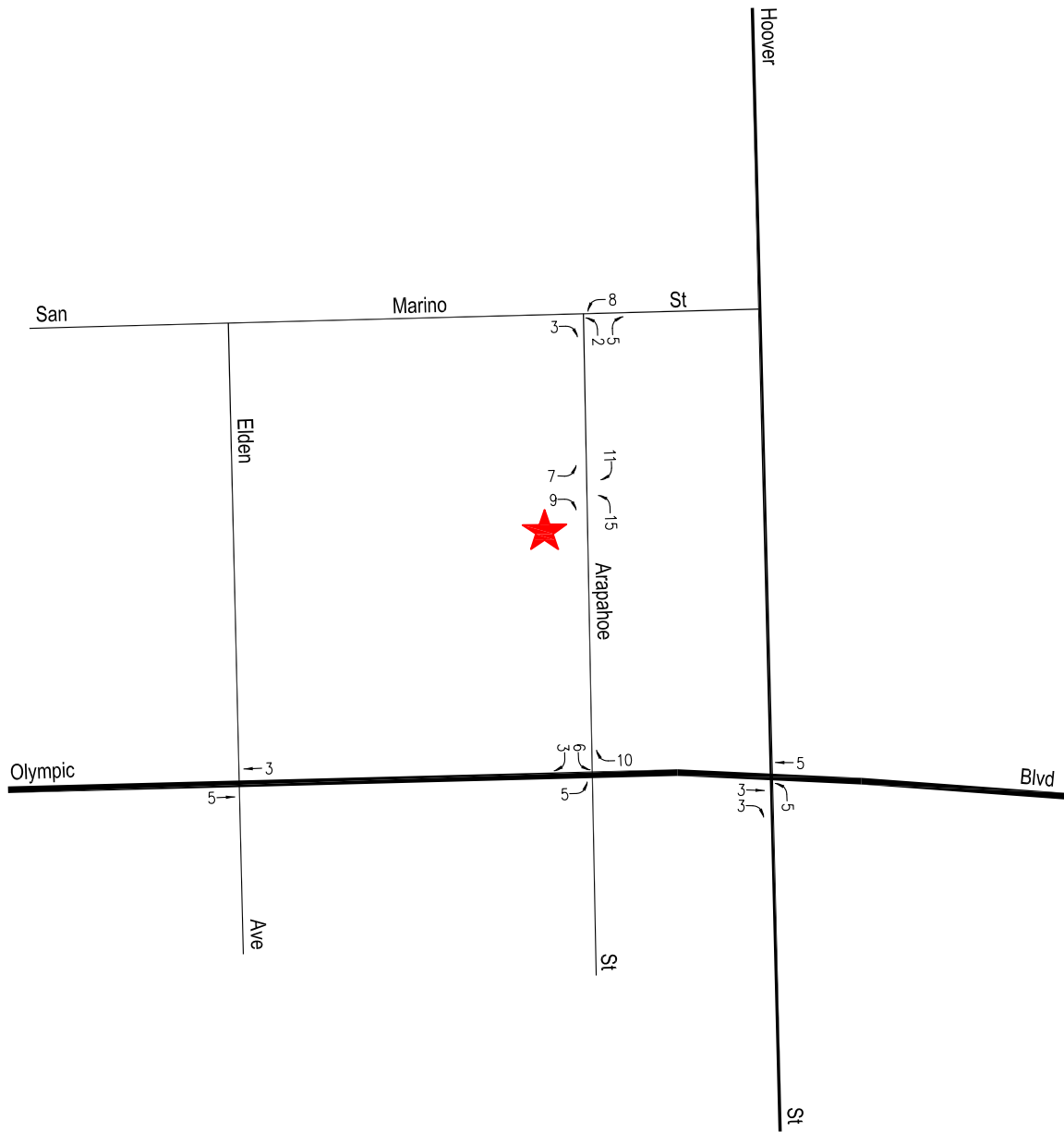
Figure 2-5  
Project Trip Distribution

Arapahoe Apartments Project

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## 3.0 PROJECT CONTEXT

### 3.1 Non-Vehicle Transport System

#### 3.1.1 Pedestrian Framework

Public sidewalks and pedestrian facilities are provided on all streets within the project vicinity. A six-foot wide public sidewalk is provided on Arapahoe Street along with an eight-foot wide parkway. Existing pedestrian destinations and transit facilities located within an approximately one-quarter mile radius (i.e., 1,320 feet) from the project site are noted in **Figure 3-1**. *Figure 3-1* also shows potential pedestrian destinations near the project. As presented in *Figure 3-1*, the following pedestrian facilities currently are provided near the project site:

- American with Disabilities Act (ADA) handicap ramps are provided at the following intersections located near the project site:
  - Magnolia Avenue/San Marino Street
  - Arapahoe Street/San Marino Street
  - Elden Street/Olympic Boulevard
  - Arapahoe Street/Olympic Boulevard
  - Hoover Street/Olympic Boulevard
- Traditional parallel bar or continental style pedestrian crosswalks with varying widths are provided at Olympic Boulevard and James M. Wood Boulevard intersections located in the project vicinity.
- Intersection Bulb-outs:
  - No intersection bulb-outs have been documented in the immediate project vicinity.

The project has been designed to encourage pedestrian activity and walking as a transportation mode<sup>4</sup>. As indicated in *Figure 2-3*, walkways are planned within the proposed project which will connect to adjacent sidewalks in a manner that promotes walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are several criteria that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be

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<sup>4</sup> For example, refer to <http://www.walkscore.com/>, which generates a walkability score of approximately 93 (Walker's Paradise) out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.



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SITE



SIGNAL



STOP SIGN



0.25 MILE RADIUS  
FROM PROJECT SITE



ADA



ADA YELLOW  
TRUNCATED DOME



CROSSWALK



CROSSWALK  
YELLOW



BIKE RACK



BUS STOP



BUS STOP WITH  
BUS BENCH



BUS STOP WITH  
BUS BENCH & SHELTER



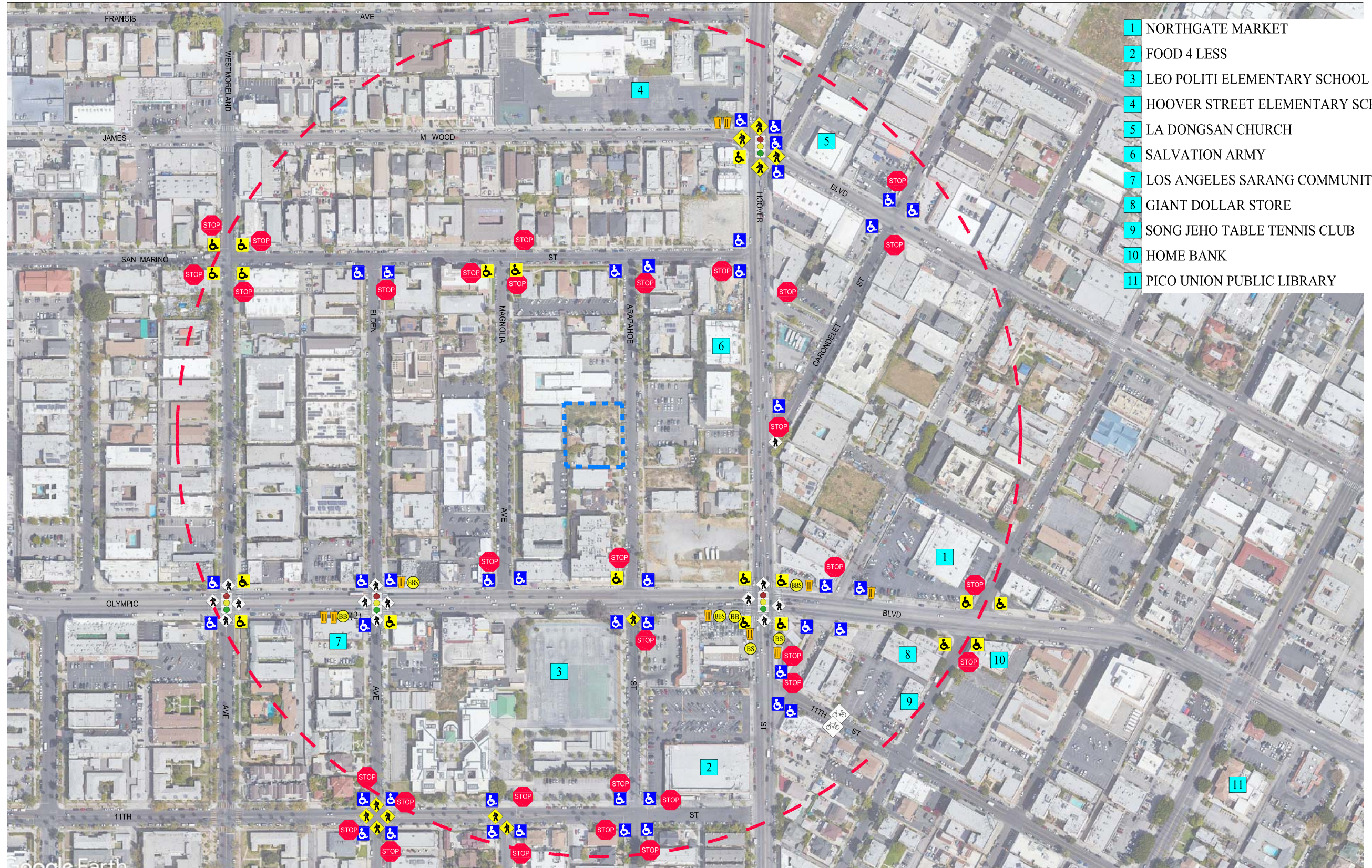
BIKE ROUTE



MAIL BOX



TRASH



- 1 NORTHGATE MARKET
- 2 FOOD 4 LESS
- 3 LEO POLITI ELEMENTARY SCHOOL
- 4 HOOVER STREET ELEMENTARY SCHOOL
- 5 LA DONGSAN CHURCH
- 6 SALVATION ARMY
- 7 LOS ANGELES SARANG COMMUNITY CHURCH
- 8 GIANT DOLLAR STORE
- 9 SONG JEHO TABLE TENNIS CLUB
- 10 HOME BANK
- 11 PICO UNION PUBLIC LIBRARY

Figure 3-1  
Existing Nearby Pedestrian & Transit Facilities  
and Potential Pedestrian Destinations

Arapahoe Apartments Project



delayed, diverted, or placed in danger. The widely accepted characteristics of walkability are as follows:

- **Connectivity:** People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.
- **Convivial:** Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.
- **Conspicuous:** Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.
- **Comfortable:** High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.
- **Convenient:** Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the proposed project pedestrian walkways indicates that these primary characteristics are accommodated within the project. Proposed project features would include landscaped and lighted pedestrian walkways connecting facilities within the site, as well as connections with the adjacent public sidewalk on the Arapahoe Street project frontage. Street trees and streetscape plantings should be introduced along the same public frontage in accordance with the City's standards. In addition, project signage could include general ground level and wayfinding pedestrian signage around the perimeter of the project site, building identification signs, and other sign types. Wayfinding signs would be located at access points to any on-site amenities and facilities, parking areas, corridors and elevator lobbies.

### **3.1.2 Bicycle Network**

Bicycle access to the project site is facilitated by the City's bicycle roadway network. Walk Score calculates a bike score based on the topography, number and proximity of bike lanes, etc., and generates a bike score for the project site of approximately 71 (Very Bikeable) out of 100.<sup>5</sup> Existing and proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Friendly Streets, etc.) identified in the City's 2010 Bicycle Plan are located within an approximate one-mile radius from the project site.<sup>6</sup> It is important to note that the 2010 Bicycle Plan goals and policies have been folded into the Mobility

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<sup>5</sup> Refer to <http://www.walkscore.com/>, which generates the bike score for the project site. Walk Score calculates the bike score of an address by locating nearby bicycling facilities as well as connections to bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for bicycling.

<sup>6</sup> Sources: City of Los Angeles Mobility Plan 2035 (2015), and City of Los Angeles Bicycle Parking Plan; [www.labikeplan.org](http://www.labikeplan.org). As noted in the Mobility Plan 2035, the 2010 Bicycle Plan and policies have been folded into the Mobility Plan to reflect a commitment to a balanced, multi-modal viewpoint.

Plan 2035 to reflect a commitment to a balanced, multi-modal viewpoint. The location of the City's bicycle enhanced network (low stress network) in close proximity to the project site and in the surrounding area is shown in **Figure 3-2**. The location of the City of Los Angeles' proposed bicycle lane network in close proximity to the project site and in the surrounding area is illustrated in **Figure 3-3**.

The Federal and State transportation systems recognize three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

## **3.2 Transit Framework**

Public bus transit service within the project study area is currently provided by the County of Los Angeles Metropolitan Transportation Authority (Metro). A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in **Table 3-1**. The existing public transit routes in the proposed project vicinity are illustrated in **Figure 3-4**.

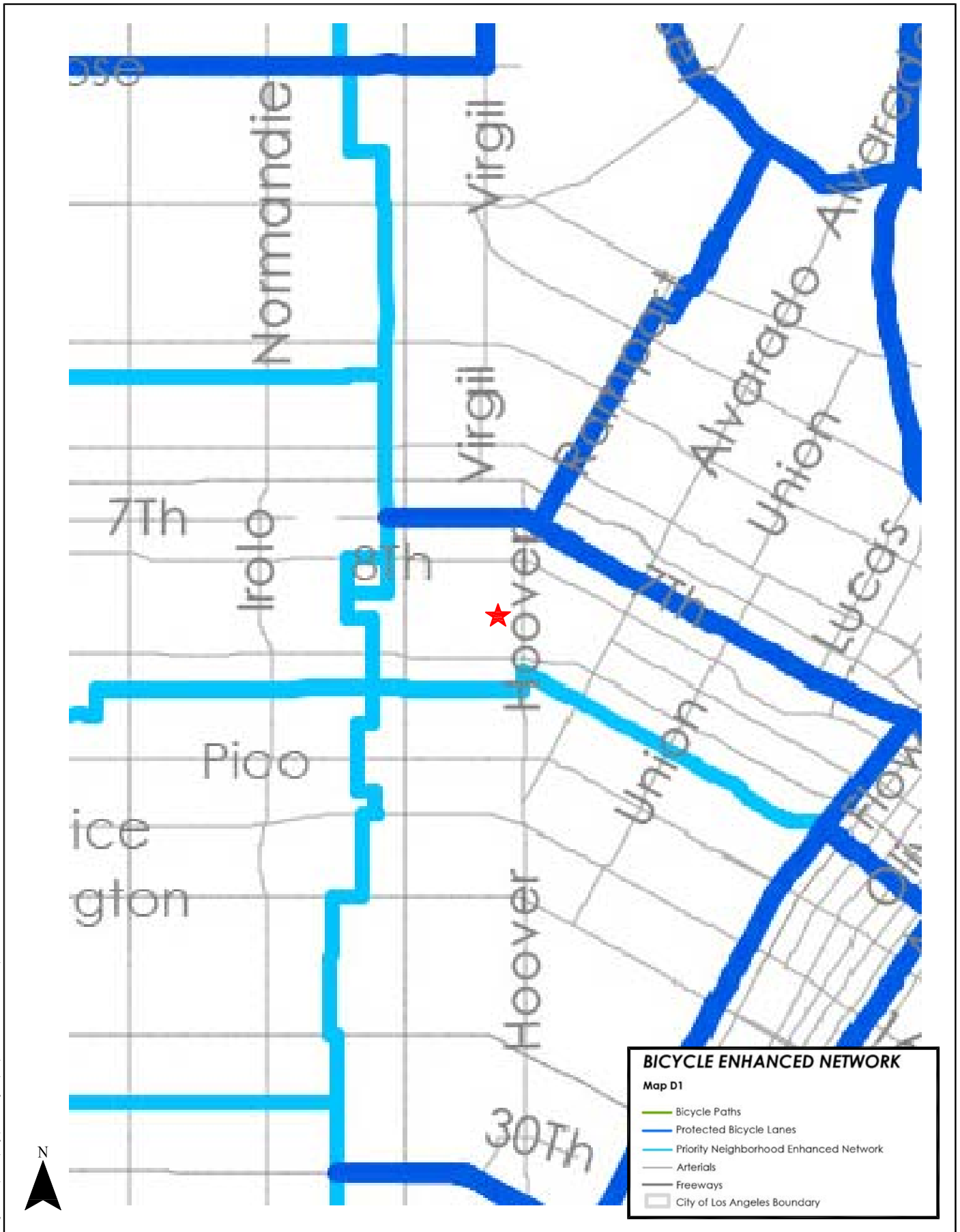
## **3.3 Vehicle Network**

### **3.3.1 Roadway Classifications**

The City utilizes the roadway categories recognized by regional, state, and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.
- *Arterial* roadways are major streets (e.g., Boulevard and Avenue designations) that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commute traffic.
- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through

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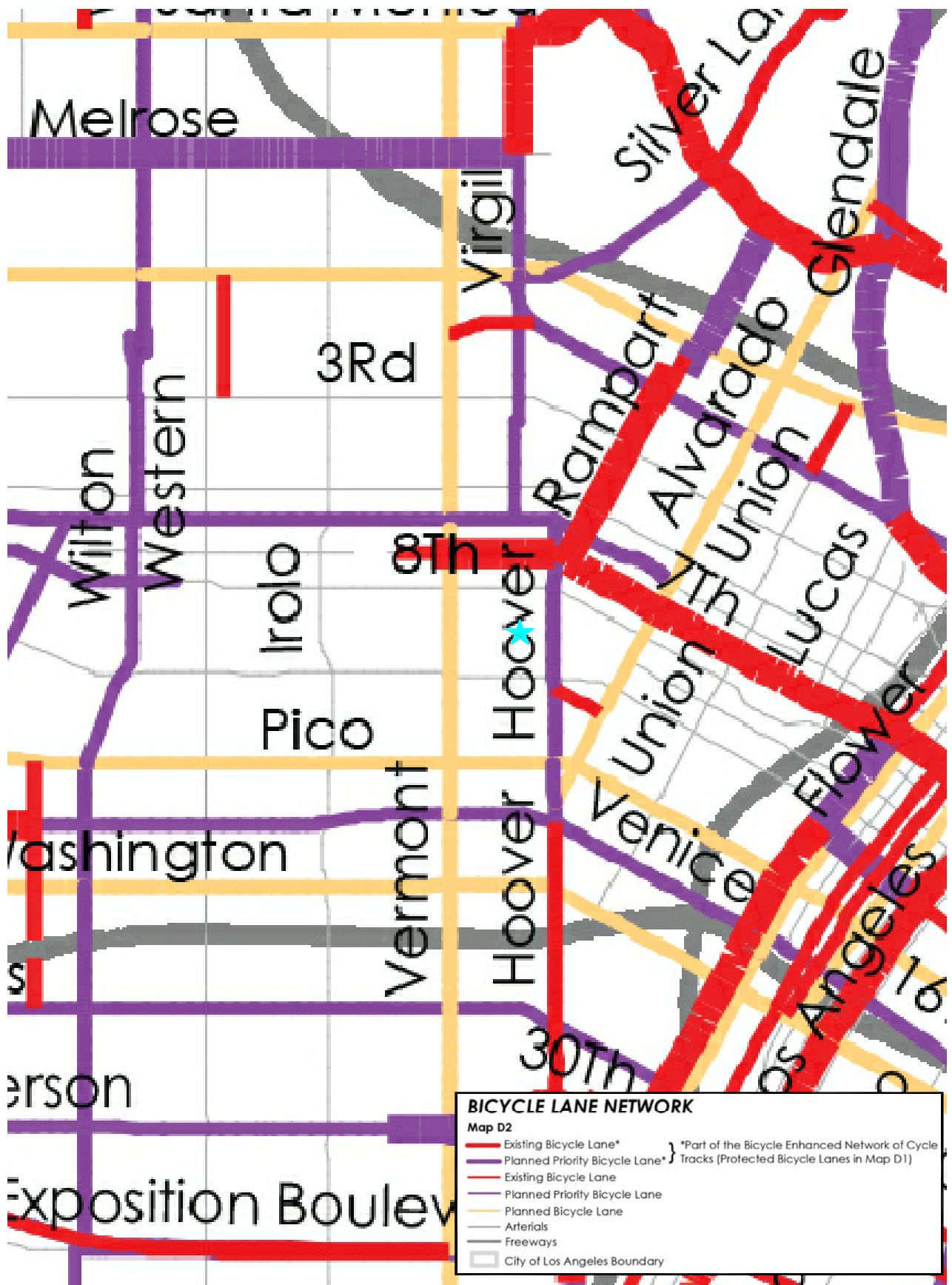
MAP SOURCE: CITY OF LOS ANGELES MOBILITY PLAN 2035

★ PROJECT SITE

Figure 3-2  
City of Los Angeles Bicycle  
Enhanced Network (low Stress Network)

Arapahoe Apartments Project

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**Table 3-1  
EXISTING TRANSIT ROUTES [1]**

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 28	Century City to Downtown Los Angeles	Olympic Boulevard, Hoover Street, Elden Avenue	EB WB	6 6	6 6
Metro 603	Los Angeles to Glendale via Pico-Union, Westlake, Echo Park, Alwater Village	Hoover Street, James M. Wood, Olympic Boulevard, 12th Street	NB SB	5 5	5 5
<b>TOTAL</b>				22	22

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) website, 2022.



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engineers

Arapahoe Apartments Project



travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.
- *Alleys* are common throughout the City. Alleys parallel to major and secondary highways provide an essential service function, enable limitations on curb cuts, and assist traffic flow on arterial streets.

### **3.3.2 Roadway Descriptions**

Immediate access to the project site is provided via Arapahoe Street. The existing roadway configurations and intersection controls at the study intersections are displayed in **Figure 3-5** and descriptions of the existing roadways (e.g., number of travel lanes, median type, speed limit, etc.) are provided in **Table 3-2**.

### **3.3.3 Regional Highway Access**

Regional access to the project site is provided mainly by the I-110 (Harbor) Freeway and the I-10 (Santa Monica) Freeway as shown in **Figure 1-1**. A brief description of the I-110 and I-10 Freeways is provided in the following paragraph.

*I-110 (Harbor) Freeway* is a major north-south oriented freeway connecting the Pasadena area to the north with the San Pedro area to the south. South of Downtown Los Angeles, I-110 Freeway generally contains four mainline lanes and two elevated carpool/transitway lanes in each direction. Northbound and southbound ramps are provided on the I-110 Freeway at 8<sup>th</sup> Street, 11<sup>th</sup> Street, and James M. Wood Boulevard, approximately one mile east of the project site.

*I-10 (Santa Monica) Freeway* is a major east-west oriented freeway connecting Santa Monica to the west and the Inland Empire to the east. The Santa Monica Freeway generally contains four mainline freeway lanes in each direction along with auxiliary lanes in the project vicinity. Access to and from I-10 is available via ramp access connections via Hoover Street and Vermont Avenue. The I-10 Freeway is located approximately one mile south of the project site.

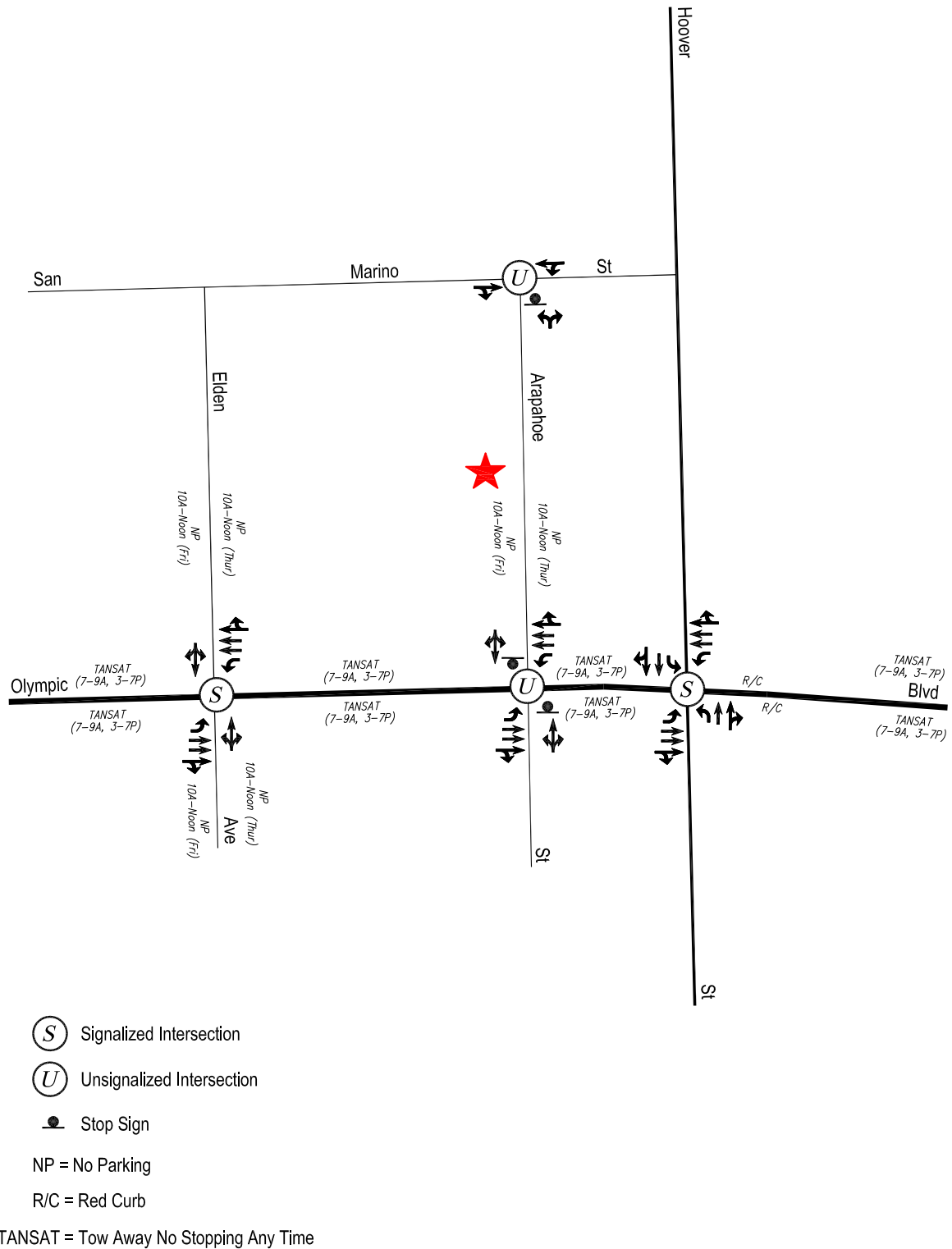
### **3.3.4 City of Los Angeles High Injury Network**

Vision Zero<sup>7</sup> is a citywide initiative which prioritizes the safety of pedestrians and bicyclists on public streets, with the understanding that roads which are safe for vulnerable users will be safer for all users, in an effort to eliminate traffic fatalities. Key elements of the policy, such as reducing traffic speeds, are founded on the principles of engineering, education, enforcement, evaluation, and

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<sup>7</sup> Vision Zero Los Angeles 2015-2025, August 2015.

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**Figure 3-5**  
**Existing Street System**

**Table 3-2  
EXISTING ROADWAY DESCRIPTIONS**

ROADWAY	CLASSIFICATION [1]	TRAVEL LANES		MEDIAN TYPES [4]	SPEED LIMIT
		DIRECTION [2]	NO. LANES [3]		
Elden Avenue	Local Street	NB-SB	2	N/A	25
San Marino Street	Local Street	EB-WB	2	N/A	25
Arapahoe Street	Local Street	NB-SB	2	N/A	25
Hoover Street	Avenue II	NB-SB	4	N/A	35
Olympic Boulevard	Boulevard II	EB-WB	6 [5]	2WLT	35

Notes:

[1] Roadway classifications obtained from the *City of Los Angeles Mobility Plan 2035*, adopted September 2016.

[2] Direction of roadways in the project area: NB-SB = northbound and southbound; and EB-WB = eastbound and westbound.

[3] Number of lanes in both directions on the roadway. Variations in number of travel lanes due to time restricted on-street parallel parking are noted below.

[4] Median type of the road: RMI = Raised Median Island; 2WLT = 2-Way Left-Turn Lane; and N/A = Not Applicable.

[5] Tow Away No Stopping 7 AM to 9 AM and 3 PM to 7 PM in the eastbound direction and westbound directions.

equity. Originating in Sweden, the policy has been adopted in numerous other North American cities, including California cities such as San Francisco and San Diego.

Mayor Eric Garcetti issued Executive Directive No. 10 in August 2015, formally launching the Vision Zero initiative in Los Angeles. Vision Zero is also a stated safety objective in the Mobility Plan 2035, which sets the goal of zero traffic deaths by 2035. Jointly directed by LADOT and the Police Department, Vision Zero takes a multi-disciplinary approach to identifying safety risk factors and implementing solutions on a citywide scale. Using a methodology originally developed by the San Francisco Public Health Department, the Vision Zero Task Force has identified streets where investments in safety will have the most impact in reducing severe injuries and traffic fatalities in the City. These roads are collectively known as the High Injury Network (HIN). The HIN will be reviewed by the LADOT's Vision Zero group for potential engineering re-design as well as educational and enforcement campaigns.

The proposed project is located along the west side of Arapahoe Street between San Marino Street and Olympic Boulevard within the Wilshire Community Plan area. As shown in **Figure 3-6**, roadways in the immediate vicinity of the proposed project which have been identified on the HIN are noted below:

- Olympic Boulevard between La Brea Avenue and Spring Street
- San Marino Street between Western Avenue and Vermont Avenue
- Hoover Street between Olympic Boulevard and Jefferson Boulevard
- 9<sup>th</sup> Street between Hoover Street and Westlake Avenue

If a proposed project results in significant transportation impacts, LADOT's Vision Zero group will review those specific locations and immediate vicinity for potential safety enhancements that are consistent with the City's Vision Zero initiative.

### **3.4 Traffic Count Data**

Manual counts of vehicular turning movements were researched for the following four intersections identified for review in consultation with LADOT staff:

1. Elden Avenue/Olympic Boulevard
2. Arapahoe Street/San Marino Street
3. Arapahoe Street/Olympic Boulevard
4. Hoover Street/Olympic Boulevard

The manual counts were conducted by an independent traffic count subconsultant (City Traffic Counters) at the study intersections from 7:00 to 10:00 AM to determine the AM peak commute



hour, and from 3:00 to 6:00 PM to determine the PM peak commute hour. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were collected during the peak periods. The traffic counts were conducted when local schools were in session. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 10:00 AM and 3:00 to 6:00 PM generally associated with metropolitan Los Angeles peak commute hours. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in **Figures 3-7** and **3-8**, respectively. Summary data worksheets of the traffic count data for the study intersections are contained in **Appendix B**.

### **3.5 Cumulative Development Projects**

#### **3.5.1 Related Projects**

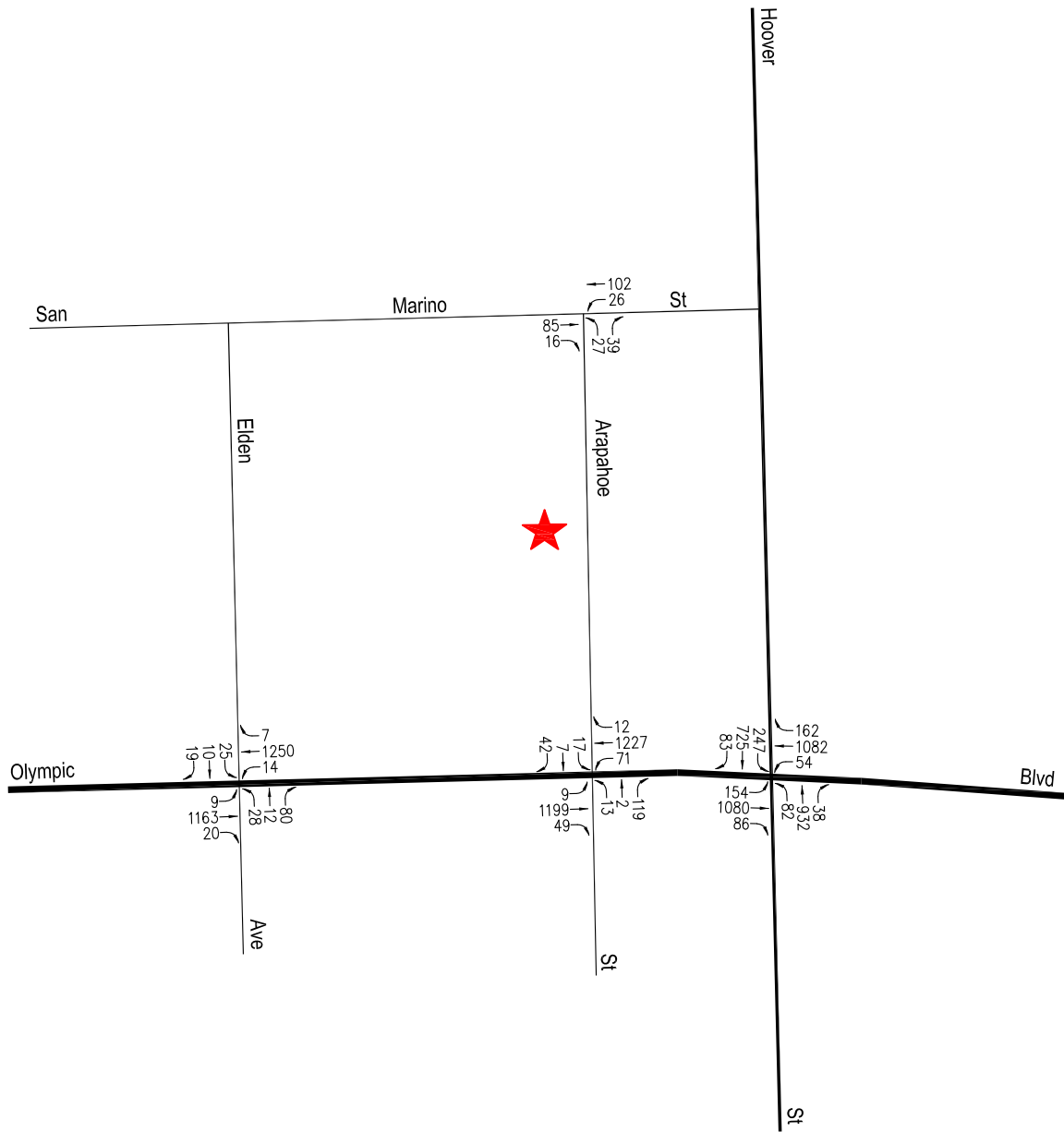
A list of cumulative development projects (i.e., related projects) in the study area (i.e., within an approximate one-half (0.5) mile radius from the project site) was researched based on data available at the City of Los Angeles. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing development. The related projects research was based on information on file with both LADOT and LADCP. For LADOT, a list of related projects was obtained from the Department for an approximate 0.5-mile radius from the project site. For LADCP, the research included, but was not limited to, a review of proposed development projects within the study area, proposed development projects within an approximate 0.5-mile radius from the project site for which EIRs are being or have been prepared (as shown on the Major Projects section of LADCP's website), and LADCP's bi-weekly case filing reports. In addition, related projects lists from recently approved transportation impact study MOU and transportation impact studies in the project vicinity were also reviewed. The list of related projects in the project site area is presented in **Table 3-3**. The location of the related projects is shown in **Figure 3-9**.

Traffic volumes expected to be generated by the related projects were obtained from LADOT, calculated using rates provided in the ITE *Trip Generation Manual*, or they were obtained from other transportation impact studies recently approved by the City. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in **Table 3-3**. The related projects traffic volumes were distributed and assigned to the street system based on the projects' locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in **Figures 3-10** and **3-11**, respectively.

#### **3.5.2 Ambient Traffic Growth**

Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. The ambient growth factor was based on general traffic growth factors provided in the *2010 Congestion Management Program for Los Angeles County* (the "CMP manual") and determined in consultation with City staff. It is noted that based on review of the

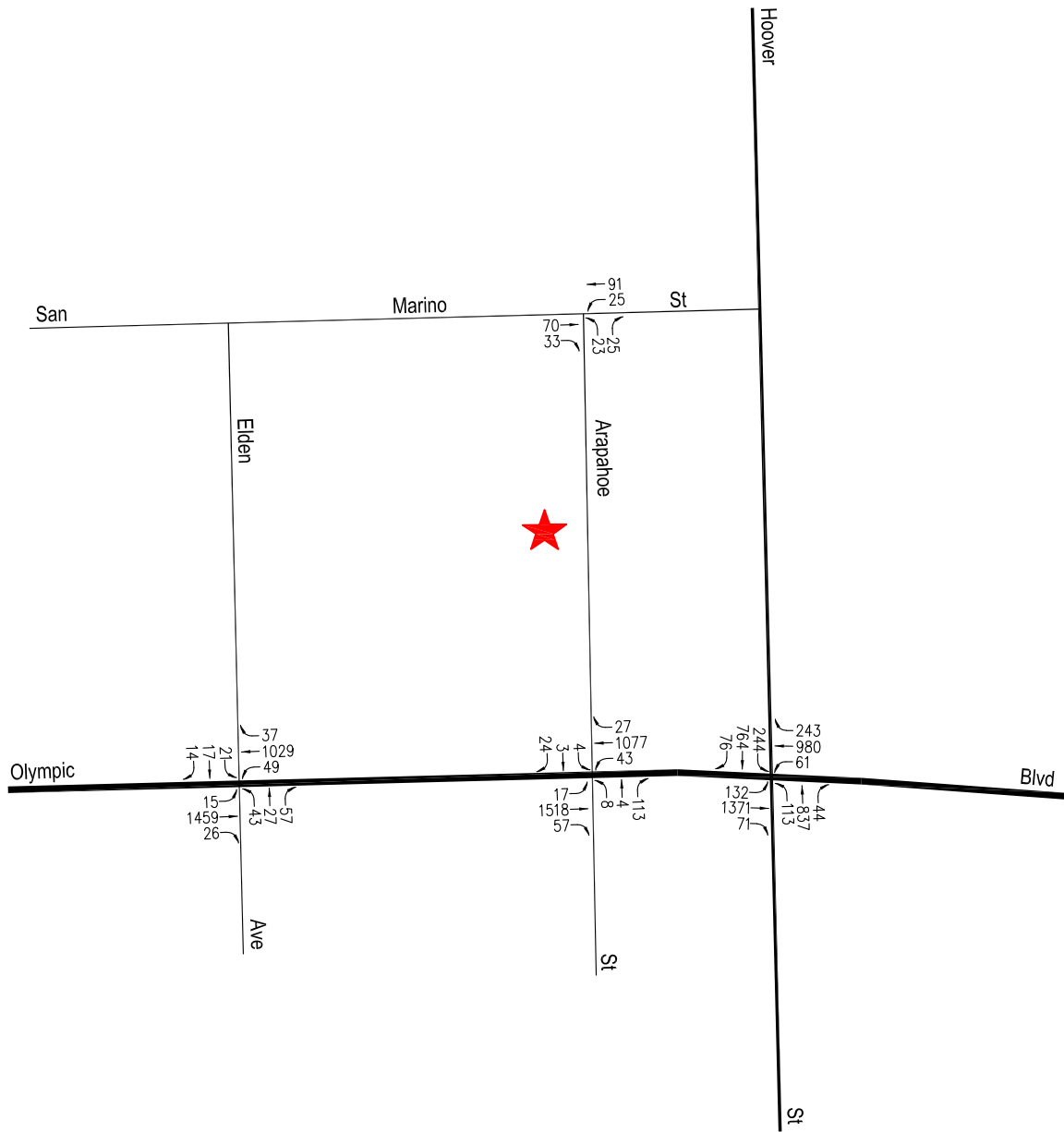
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★ Project Site

Figure 3-7  
Existing Vehicle Traffic Volumes  
Weekday AM Peak Hour  
Arapahoe Apartments Project

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★ Project Site

Figure 3-8  
Existing Vehicle Traffic Volumes  
Weekday PM Peak Hour  
Arapahoe Apartments Project



Table 3-3  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]		PM PEAK HOUR VOLUMES [2]	
			LAND-USE	SIZE			IN	OUT	IN	OUT
1	Proposed	950 S. Berendo Street	Apartments	77 DU	[1]	333	6	17	23	16
2	Proposed	3216 W. 8th Street	Hotel Condominiums	80 Rooms 8 DU	[3] [4]	639 54	21	16	37	24
			Retail	7,273 GLSF	[5]	396	10	2	3	3
3	Proposed	958 S. Menlo Avenue	Hotel	96 Rooms	[1]	498	24	14	38	25
4	Proposed	3160 W. Geneva Street	Medical Office Senior Housing	141,164 GSF 40 DU	[1]	3,320	195	57	252	127
5	Proposed	550 S. Shatto Place	Apartments Office Restaurant	367 DU 11,965 GSF 24,435 GSF	[1]	2,446	10	136	146	170
6	Proposed	1700 W. Olympic Boulevard	Charter Middle School	450 Students	[1]	941	186	119	305	28
7	Proposed	1025 S. Mariposa Avenue	Apartments	100 DU	[1]	392	7	19	26	19
8	Proposed	2859 Francis Avenue	Apartments	110 DU	[1]	508	10	30	40	29
9	Proposed	1612 W. Pico Boulevard	Charter (K-4) School	1,000 Students	[1]	2,182	434	280	714	65
10	Proposed	1224 S. Menlo Avenue	Affordable Housing	131 DU	[1]	349	18	38	56	24
11	Proposed	2405 W. 8th Street	Apartments Retail	264 DU 5,982 GLSF	[1]	950	23	64	87	68
12	Proposed	2870 W. Olympic Boulevard	Apartments Retail	126 DU 6,000 GLSF	[1]	825	8	44	52	47
13	Proposed	905 S. Beacon Avenue	Apartments Retail	145 DU 2,400 GLSF	[1]	589	20	40	60	42
14	Proposed	825 S. Coronado Street	Apartments	77 DU	[1]	508	7	24	31	24
15	Proposed	3440 W. Wilshire Boulevard	Apartments Retail High-Turnover Restaurant Fast Casual Restaurant	640 DU 5,538 GLSF 4,600 GSF 2,000 GSF	[1]	2,348	30	123	153	137
16	Proposed	619 Westlake Avenue	Apartments	78 DU	[1]	233	11	16	27	11
17	Proposed	1124 S. Normandie Avenue	Apartments	84 DU	[1]	526	10	25	35	26
18	Proposed	525 S. Virgil Avenue	Apartments Affordable Housing Office	113 DU 19 DU 34,600 GSF	[1]	604	(5)	37	32	34

Table 3-3 (Continued)  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]		PM PEAK HOUR VOLUMES [2]	
			LAND-USE	SIZE			IN	OUT	IN	OUT
19	Proposed	625 S. La Fayette Park Place	Bridge Housing	70 Beds	[1]	89	4	5	4	9
20	Proposed	2972 W. 7th Street	Apartments Retail High-Turnover Restaurant	228 DU 4,105 GLSF 3,738 GSF	[1]	1,631	32	61	77	53
21	Proposed	2501 W. 7th Street	Charter Middle School	450 Students	[1]	502	99	63	16	20
22	Proposed	689 S. Catalina Street	Apartments	61 DU	[1]	365	5	23	22	12
23	Proposed	840 S. Mariposa Avenue	Apartments	173 DU	[1]	978	15	60	75	61
24	Proposed	2005 W. James M. Wood Boulevard	Hotel	100 Rooms	[1]	545	24	18	42	20
25	Proposed	2250 W. Pico Boulevard	Hotel	125 Rooms	[1]	409	26	19	45	10
26	Proposed	329 S. Rampart Boulevard	Apartments Affordable Housing	53 DU 8 DU	[1]	279	6	17	23	9
27	Proposed	1030 S. Lake Street	Assisted Living Senior Housing	338 Beds 34 DU	[1]	939	39	23	62	48
28	Proposed	923 S. Kenmore Avenue	Apartments	68 DU	[1]	432	7	26	33	15
29	Proposed	1810 W. Venice Boulevard	Self-Storage	154,024 GSF	[1]	385	12	10	22	20
30	Proposed	1420 S. Bonnie Brae Street	Apartments	26 DU	[1]	193	3	12	15	6
31	Proposed	966 S. Dewey Avenue	Hotel	99 Rooms	[1]	677	28	15	43	24
32	Proposed	926 S. Kingsley Drive	Apartments	69 DU	[1]	408	6	25	31	25
33	Proposed	668 S. Coronado Street	Apartments Retail	122 DU 1,182 GLSF	[1]	947	14	48	62	34
34	Proposed	631 S. Vermont Avenue	Hotel Condominiums Office Retail	200 Rooms 250 DU 49,227 GSF 21,320 GLSF	[1]	2,599	95	95	115	120
35	Proposed	510 S. Vermont Avenue	Office Retail Senior Housing Community Center Apartments	2,166 Emp 17,500 GLSF 72 DU 13,200 GSF 246 DU	[1]	3,215	216	104	121	293
36	Proposed	3240 W. Wilshire Boulevard	Hotel Apartments Retail	162 Rooms 545 DU 5,222 GLSF	[1]	1,353	15	173	188	23

Table 3.3 (Continued)  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]		PM PEAK HOUR VOLUMES [2]	
			LAND-USE	SIZE			IN	OUT	IN	OUT
37	Proposed	1930 W. Wilshire Boulevard	Apartments Theater Classroom Hotel	478 DU 850 Seats 50 Students 220 Rooms	[1]	1,355	(44)	128	103	(41)
38	Proposed	2501 W. Olympic Boulevard	Apartments Retail	173 DU 36,180 GLSF	[1]	1,911	27	72	100	73
39	Proposed	605 S. Vermont Avenue	Apartments Museum	103 DU 30,937 GSF	[1]	755	17	39	42	37
40	Proposed	1322 W. Linwood Avenue	Apartments	84 DU	[1]	449	5	30	28	14
41	Proposed	1017 S. Mariposa Avenue	Apartments	79 DU	[1]	373	5	23	23	12
42	Proposed	616 S. Westmoreland Avenue	Apartments Restaurant Retail	77 DU 2,360 GSF 745 GLSF	[1]	446	1	30	31	5
43	Proposed	2649 W. San Marino Avenue	Apartments	45 DU	[1]	246	4	15	15	8
44	Proposed	2965 W. 6th Street	Hotel Restaurant	99 Rooms 545 GSF	[1]	688	26	18	25	25
45	Proposed	1011 S. Park View Street	Apartments	108 DU	[1]	594	9	38	38	19
46	Proposed	1728 W. 7th Street	Restaurant Bar	9,600 GSF 3,500 GSF	[1]	362	(30)	(40)	50	14
47	Under Construction	2850 W. 7th Street	Condominiums Hotel Retail	160 DU 40 Rooms 3,600 GLSF	[1]	1,057	20	72	72	42
48	Under Construction	820 S. Hoover Street	Condominiums Retail	32 DU 4,500 GLSF	[1]	414	75	15	18	14
49	Proposed	805 S. Catalina Street	Condominiums Retail	300 DU 5,000 GLSF	[1]	1,935	24	119	110	57
<b>TOTAL</b>						45,172	1,811	2,464	2,363	1,866
								4,275		4,229

[1] Source: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP), except as noted below. The peak hour traffic volumes were forecast on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation", 11th Edition, 2021. For those related projects that LADOT provided trip data, the peak hour directional distribution data provided in the ITE "Trip Generation" manual were utilized.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 310 (Hotel) trip generation average rates.

[4] ITE Land Use Code 220 (Multifamily Housing [Low-Rise] Not Close to Rail Transit) trip generation average rates.

[5] ITE Land Use Code 822 (Strip Retail Plaza [<40k]) trip generation average rates.

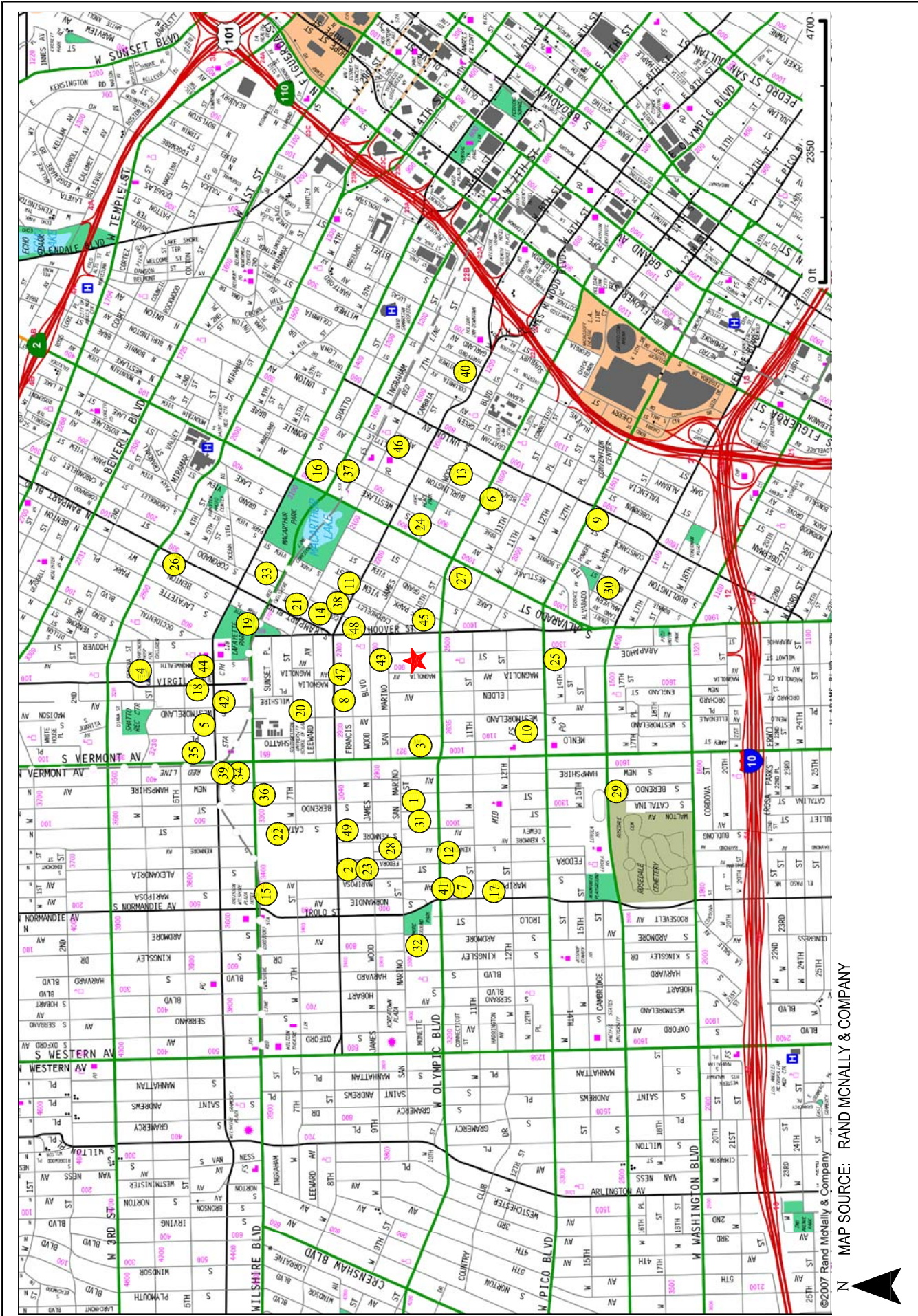


Figure 3-9  
Location of Related Projects

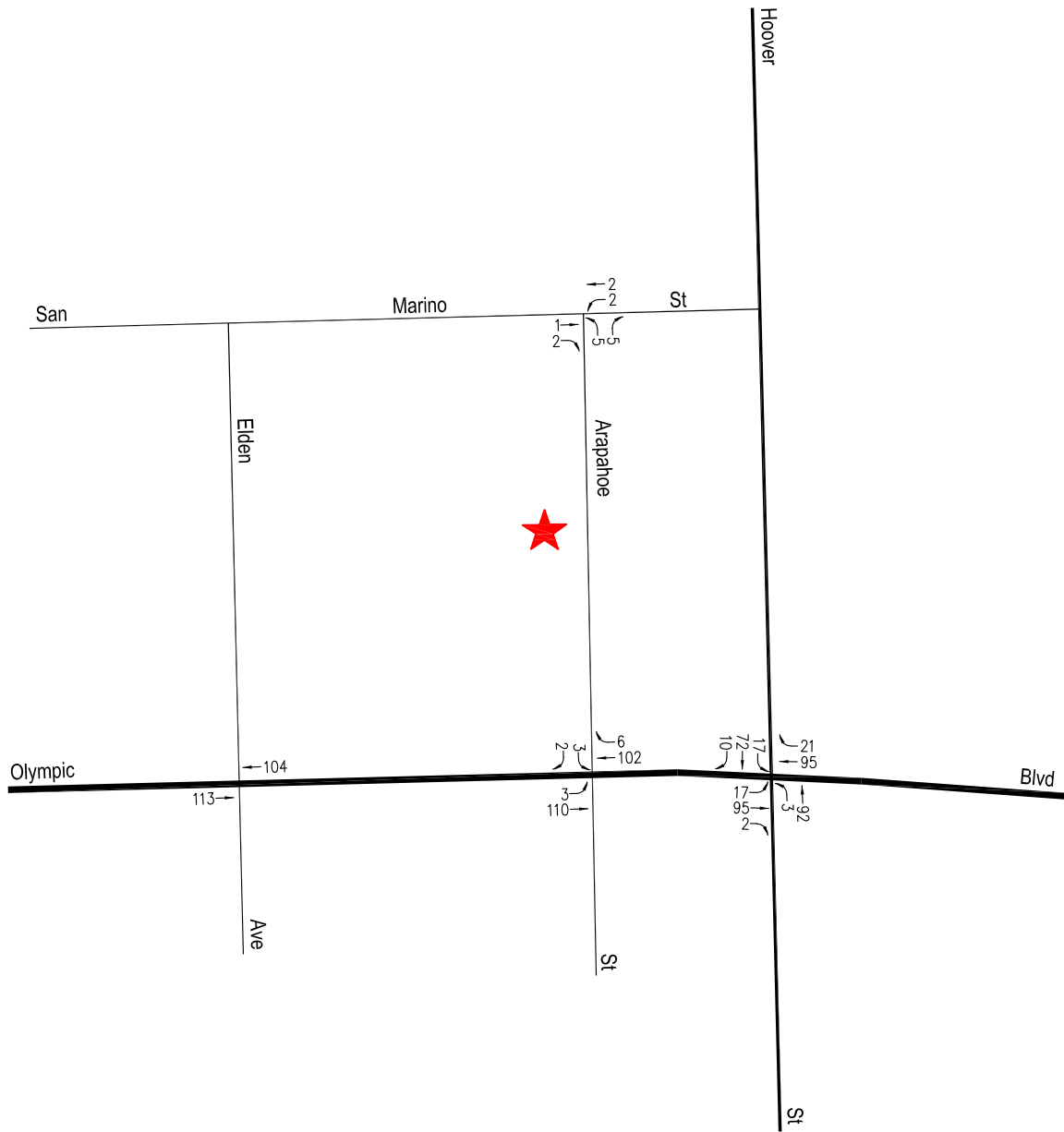
★ Project Site  
XX Related Project







c:\job\_file\4472\dwg\13-11.dwg 06/20/2022 11:34:53 rodriguez ----



general traffic growth factors provided in the CMP manual for the project study area (i.e., Regional Statistical Area 17 that includes Wilshire area), it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 1.0% per year between the years 2020 and 2025. An annual growth rate of one percent (1.0%) until the year 2025 (i.e., the anticipated project build-out year) was selected for this analysis in consultation with LADOT during the scoping process. Therefore, application of this one percent (1.0%) ambient growth factor in addition to the forecast traffic generated by the related projects allows for a conservative forecast of future traffic volumes in the project study area as incorporation of both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes. The cumulative development projects should already be incorporated as part of the growth rate projection per the adopted, local and regional planning documents (i.e., which account for the future population, housing, and employment [socio-economic data] projections).

## 4.0 CEQA ANALYSIS OF TRANSPORTATION IMPACTS

### 4.1 Consistency With Adopted Plans, Programs, Ordinances or Policies (Threshold T-1)

The City of Los Angeles aims to achieve an accessible and sustainable transportation system that meets the needs of all users. The City's adopted transportation-related plans and policies affirm that streets should be safe and convenient for all users of the transportation system, including pedestrians, bicyclists, motorists, public transit riders, disabled persons, senior citizens, children, and movers of commercial goods. Therefore, the transportation requirements and mitigations for proposed developments should be consistent with the City's transportation goals and policies.

Proposed projects shall be analyzed to identify potential conflicts with adopted City plans and policies and, if there is a conflict, improvements that prioritize access for and improve the comfort of people walking, bicycling, and riding transit in order to provide safe and convenient streets for all users should be identified. Projects designed to encourage sustainable travel help to reduce vehicle miles traveled. This section provides a review of the screening criteria and a summary of the consistency of the proposed Arapahoe Apartments project with the City's adopted plans and policies.

#### 4.1.1 Screening Criteria

If the project requires a discretionary action, and the answer is yes to any of the following questions, further analysis is required to assess whether the proposed project would conflict with adopted City plans, programs, ordinances, or policies that establish the transportation planning framework for all travel modes:

- Does the project require a discretionary action that requires the decision-maker to find that the decision substantially conforms to the purpose, intent and provisions of the General Plan?
  - ▣ Yes, the project requires a discretionary action.
- Is the project known to directly conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety?
  - ▣ No.
- Is the project required to or proposing to make any voluntary modifications to the public right-of-way (i.e., dedications and/or improvements in the right-of-way, reconfigurations of curb line, etc.)?
  - ▣ No

As the answer is yes to at least one of the screening criteria (i.e., project requires a discretionary action), further analysis is required to assess whether the proposed project would conflict with adopted City plans, programs, ordinances, or policies.



#### **4.1.2 Impact Criteria and Methodology**

The impact criteria set forth in the City's TAG for conflicts with plans, programs, ordinances, or policies (referred to as Threshold T-1) is defined as follows:

- Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

The threshold test is to assess whether a project would conflict with an adopted program, policy, plan, or ordinance that is adopted to protect the environment. In general, transportation policies or standards adopted to protect the environment are those that support multimodal transportation options and a reduction in VMT. Conversely, a project would not be shown to result in an impact merely based on whether a project would not implement a particular program, plan, policy, or ordinance. Many of these programs must be implemented by the City itself over time, and over a broad area, and it is the intention of this threshold test to ensure that proposed development projects and plans do not preclude the City from implementing adopted programs, plans and policies. This determination may require consultation with LADCP and LADOT.

The methodology for determining project impacts associated with conflicts with plans, programs, ordinances, or policies is defined per the City's TAG as follows:

- A project that generally conforms with, and does not obstruct, the City's development policies and standards will generally be considered to be consistent. The Project Applicant should review the documents and ordinances identified in the TAG (refer to Table 2.1-1 on pages 2-3 and 2-11) for City plans, policies, programs, ordinances and standards relevant to determining project consistency. The list highlights City documents that establish the regulatory framework. Attachment D of TAG contains a Plan Consistency Worksheet which provides a specific list of questions that must be answered in order to help guide whether the project conflicts with City circulation system policies. A 'yes' or 'no' answer to these questions does not determine a conflict. Rather, as indicated in Attachment D of the TAG, the Project Applicant must provide substantiating information to help determine whether the proposed project precludes the City's implementation of any adopted policy and/or program that was adopted to protect the environment. A mere conflict with adopted transportation-related policies, or standards that requires administrative relief or legislative change does not in itself constitute an impact.
- If vacation of a public right-of-way, or relief from a required street dedication is sought as part of a proposed project, an assessment should be made as to whether the right-of-way in question is necessary to serve a long-term mobility need, as defined in the Mobility Plan 2035, transportation specific plan, or other planned improvement in the future.
- The analysis of cumulative impacts may be quantitative or qualitative. Each of the plans, ordinances and policies reviewed to assess potential conflicts with proposed projects should be reviewed to assess cumulative impacts that may result from the proposed project in

combination with other development projects in the study area. In addition, the cumulative analysis should also consider known development projects and planned transportation system improvements within the study area as identified in consultation with LADOT.

As noted in Subsection 2.1.4, based on current guidelines, related projects considered in the cumulative analysis are known development projects located within one-quarter mile (1,320 foot) radius of the project site. Please refer to the list of related projects identified in *Table 3-3* and *Figure 3-9* for the location of the related projects in relation to the proposed project site.

#### **4.1.3 Review of Project Consistency**

This section provides a summary of the consistency review comparing the characteristics of the proposed project and site design features (i.e., including the site access and circulation scheme) with the City's adopted plans and policies. The following paragraphs provide more detail with respect to the documents listed in Table 2.1-1 of the TAG, which are the series of City documents or plans that establish the regulatory framework for development in the City. Each of the documents listed in Table 2.1-1 of the TAG was reviewed for applicability to the Project, and the relevant transportation-related policies are summarized below, along with the Project's conformance.

##### Mobility Plan

The Mobility Plan combines “complete street” principles with the following goals and objectives that define the City's mobility priorities:

- **Safety First:** Design and operate streets in a way that enables safe access for all users, regardless of age, ability, or transportation mode choice.
- **World Class Infrastructure:** A well-maintained and connected network of streets, paths, bikeways, trails, and more provides Angelenos with the optimum variety of mode choices.
- **Access for all Angelenos:** A fair and equitable system must be accessible to all and must pay particularly close attention to the most vulnerable users.
- **Collaboration, Communication, and Informed Choices:** The impact of new technologies on our day-to-day mobility demands will continue to become increasingly important to the future.
- **Clean Environments and Healthy Communities:** Active transportation modes such as bicycling and walking can significantly improve personal fitness and create new opportunities for social interaction, while lessening impacts on the environment.

The proposed project is being designed to be consistent with these mobility goals. The proposed project design does not result in modifying, removing, or otherwise affecting existing bicycle infrastructure, and the project driveways are not proposed along streets with existing bicycle facilities. The proposed project would maintain the designated driveway and roadway width

requirements as indicated in the Mobility Plan. The proposed project encourages non-motorized travel through provision of bicycle parking and will promote transit usage by complying with the City's TDM Ordinance.

All sidewalks, curb ramps and ADA ramps along the project frontage would be designed in compliance with ADA standards. The proposed project also would provide sufficient off-street parking to accommodate the project's typical daily parking demand. The proposed project does not hinder other goals and policies identified in the Mobility Plan. Therefore, the proposed project is consistent with and would not obstruct the implementation of the Mobility Plan.

#### Plan for a Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (Los Angeles Department of City Planning, March 2015) introduces guidelines for the City to follow to enhance the City's position as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and environmental issues.

The proposed project will be consistent with the Plan for a Healthy Los Angeles by prioritizing safety and access for all individuals utilizing the project site by complying with all ADA requirements and providing clearly distinct pedestrian and vehicular access points. Further, the proposed project supports healthy lifestyles by providing bicycle parking and enhancing the pedestrian environment by providing trees and landscaped plaza/s internal to the site to create a more comfortable environment for pedestrians. Thus, the proposed project would be consistent with the goals of the Plan for a Healthy Los Angeles.

#### Land Use Element of the General Plan

The City General Plan's Land Use Element contains 35 Community Plans that establish specific goals and strategies for the various neighborhoods across Los Angeles. The proposed project is located in the Wilshire Community Plan area. A detailed analysis of the proposed project's consistency with the Wilshire Community Plan area will be provided in the environmental documentation for the project's entitlement process. The proposed project is also consistent with the circulation standards and criteria of the Wilshire Community Plan as the transportation system adjacent to the project site would adequately serve the traffic generated by the project without major congestion, as demonstrated by the proposed project's transportation assessments. Therefore, the proposed project would be consistent with the Community Plan.

#### Los Angeles Municipal Code (LAMC) Section 12.21A.16

LAMC Section 12.21A.16 details the bicycle parking requirements for new developments. The proposed project's bicycle parking supply will comply with LAMC requirements.

### LAMC Section 12.26.J

LAMC Section 12.26.J is the City's TDM Ordinance, which establishes trip reduction requirements for non-residential projects in excess of 25,000 square feet. Since the proposed project is residential LAMC Section 12.26.J would not apply to the project. The proposed project therefore would not conflict with the requirements of LAMC Section 12.26.J.

### LAMC Section 12.37

LAMC Section 12.37 states that a project must dedicate and improve adjacent streets to half-right-of-way standards consistent with street designations from the Mobility Plan. As no roadway dedications and/or widenings are required, the proposed project would be consistent with LAMC Section 12.37.

### Vision Zero Action and Corridor Plans

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. The City has identified a number of streets as part of the High Injury Network where City projects will be targeted. The project site is not located adjacent to streets identified as part of the High Injury Network. The proposed project improvements to the pedestrian environment would not preclude future Vision Zero safety improvements by the City, should they be deemed necessary. Thus, the Project does not conflict with Vision Zero.

### Streetscape Plans

There are no streetscape plans adjacent to the project site and, therefore, streetscape plans do not apply to the proposed project. The proposed project will comply with any applicable landscaping and street tree requirements of the City of Los Angeles and the Wilshire Community Plan.

### Citywide Design Guidelines

Citywide Design Guidelines (Los Angeles City Planning Urban Design Studio, October 2019) identifies urban design principles to guide architects and developers in designing high-quality projects that meet the City's functional, aesthetic, and policy objectives and help foster a sense of community. The design guidelines are organized around the following approaches:

- *Pedestrian-first Design*

Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.

Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.

Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.

The proposed project would be consistent with the Design Guidelines. Adequate sidewalks will be provided in accordance with the City's Living Streets design considerations. Additionally, street palm trees would remain to provide shade for a more comfortable mobility environment for pedestrians. Therefore, the proposed project would align with Citywide Design Guidelines to provide a safe, comfortable, and accessible experience for all transportation modes.

As shown above, build-out (i.e., year 2024) of the proposed project has been found to be consistent with the relevant City plans, policies and programs and does not include any features that would preclude the City from completing and complying with these guiding documents and policy objectives. Further, the Applicant will comply with existing applicable City ordinances and the other requirements pursuant to the City's Municipal Code.

#### **4.1.4 Review of Cumulative Consistency**

This section requires consultation and confirmation with the City of Los Angeles Departments of Planning and Transportation (i.e., with LADCP and LADOT). Based on the above project consistency conclusion and review of the guiding language contained in the City's TAG, it can be concluded that this is sufficient documentation to demonstrate that there is also no cumulative inconsistency with the City's plans, policies, ordinances and programs. In addition, since the proposed project does not include any features that would preclude the City from completing and complying with these guiding documents and policy objectives, there is no cumulative inconsistency that can be determined.

## **4.2 VMT Analysis (Threshold T-2.1)**

The State of California Governor's Office of Planning and Research (OPR) issued proposed updates to the CEQA guidelines in November 2017 and an accompanying technical advisory guidance finalized in December 2018 (*OPR Technical Advisory*) that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in vehicle miles traveled (VMT). The California Natural Resources Agency certified and adopted the CEQA Guidelines in December of 2018, and are now in effect. Accordingly, the City of Los Angeles has adopted significance criteria for transportation impacts based on VMT for land use projects and plans in accordance with the amended Appendix G question:

- Threshold T-2.1: For a land use project, would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)(1)?

For land use projects, the intent of this threshold is to assess whether a land use or plan causes substantial vehicle miles traveled. The City has developed the following screening and impact criteria to address this question. The criteria below is based on the OPR technical advisory but reflects local considerations.

#### 4.2.1 Screening Criteria

If the project requires discretionary action, and the answer is no to either T-2.1-1 or T-2.1-2, further analysis will not be required for CEQA Threshold T-2.1, and a “no impact” determination can be made for that threshold:

- T-2.1-1: Would the land use project generate a net increase of 250 or more daily vehicle trips?

For purposes of screening the daily vehicle trips, a proposed project’s daily vehicle trips should be estimated using the City’s VMT Calculator tool or the most recent edition of the ITE *Trip Generation Manual*. TDM strategies that are to be applied as mitigation measures should not be considered for the purposes of screening. If existing land uses are present on the project site or there were previously terminated land uses that meet the criteria for trip credits described in the trip generation methodology discussion (refer to Subsection 3.3.4.1 of the TAG), the daily vehicle trips generated by the existing or qualified terminated land uses can be estimated using the VMT Calculator tool and subtracted from the proposed project’s daily vehicle trips to determine the net increase in daily vehicle trips.

- T-2.1-2: Would the project generate a net increase in daily VMT?

For the purpose of screening the VMT, a project’s daily VMT should be estimated using the City’s VMT Calculator tool or the City’s Travel Demand Forecasting (TDF) model. TDM strategies should not be considered for the purpose of screening. If existing land uses are present on the project site or there were previously terminated land uses that meet the criteria for trip credits description in the trip generation methodology discussion (refer to Subsection 3.3.4.1 of the TAG), the daily VMT generated by the existing or qualified terminated land uses can be estimated using the City VMT Calculator tool and subtracted from the project’s daily VMT to determine the net increase in daily VMT.

In addition to the above screening criteria, the portion of, or the entirety of a project that contains small-scale or local serving retail uses<sup>8</sup> are assumed to have less than significant VMT impacts. If the answer to the following question is no, then that portion of the project meets the screening criteria and a no impact determination can be made for the portion of the project that contains retail uses. However, if the retail project is part of a larger mixed-use project, then the remaining portion of the project may be subject to further analysis in accordance with the above screening criteria. Projects that include retail uses in excess of the screening criteria would need to evaluate the entirety of the project’s VMT, as specified in Subsection 2.2.4 of the TAG.

- If the project includes retail uses, does the portion of the project that contain retail uses exceed a net 50,000 square feet?

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<sup>8</sup> As noted in the TAG, the definition of retail for this purpose includes restaurant.

Independent of the above screening criteria, and the project requires a discretionary action, further analysis will be required if the following statement is true:

- Would the Project or Plan located within a one-half mile of a fixed-rail or fixed-guideway transit station replace an existing number of residential units with a smaller number of residential units?

For the purposes of screening for a proposed change in housing units located near fixed-rail or fixed-guideway transit for development projects, the total number of housing units that exist on the project site should be counted and compared to the total number of housing units as proposed by the project to determine if the project would result in a net decrease in housing units. For the purposes of screening for a proposed change in housing units that are in proximity to transit for land use plans, the total number of existing housing units within a one-half mile of a fixed-rail transit station that fall within the land use plan area should be counted and compared to the total housing capacity within the same area that could be built as a result of the land use plan to determine if the plan could result in a net decrease in housing.

#### **4.2.2 Impact Criteria and Methodology**

For development projects, the proposed project will have a potential VMT impact if the project meets the following:

- For residential projects, the project would generate household VMT per capita exceeding 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located.
- For office projects, the project would generate work VMT per employee exceeding 15% below the existing average work VMT per employee for the APC in which the project is located.
- For regional serving projects including retail projects, entertainment projects, and/or event centers, the project would result in a net increase in VMT.
- For other land use types, measure VMT impacts for the work trip element using the criteria for office projects above.

Different VMT significance thresholds have been established for each APC boundary area as the characteristics of each are distinct in terms of land use, density, transit availability, employment, etc. The City of Los Angeles significance thresholds (i.e., provided on a daily household VMT per capita basis and a daily work VMT per employee basis) for each of the seven (7) APC boundary areas are presented in **Table 4-1**. As the project site is located in the Central APC, the VMT impact criteria (i.e., 15% below the APC average) applicable to the proposed project is 6.0 daily household VMT per capita for the proposed residential land use.

**Table 4-1**  
**CITY OF LOS ANGELES VMT IMPACT CRITERIA [1]**

AREA PLANNING COMMISSION	15 PERCENT (15%) BELOW APC CRITERIA [2]	
	DAILY HOUSEHOLD VMT PER CAPITA	DAILY WORK VMT PER EMPLOYEE
Central	6.0	7.6
East Los Angeles	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South Los Angeles	6.0	11.6
South Valley	9.4	11.6
West Los Angeles	7.4	11.1

[1] Source: City of Los Angeles Transportation Assessment Guidelines, July 2020.

- [2] The development project will have a potential impact if the project meets the following:
- For residential projects, the project would generate household VMT per capita exceeding 15% below the existing average household VMT per capita for the APC area in which the project (refer to above [source: Table 2.2-1 of the guidelines]).
  - For office projects, the project would generate work VMT per employee exceeding 15% below the existing average work VMT per employee for the APC in which the project is located (refer to above [source: Table 2.2-1 of the guidelines]).
  - For retail projects, the project would result in a net increase in VMT.
  - For other land use types, measure VMT impacts for the work trip element using the criteria for office project above (source: Table 2.2-1 of the guidelines).



The impact methodology set forth in the TAG for a residential project such as the proposed Arapahoe Apartments project is as follows:

- “For residential projects, the project would generate household VMT per capita exceeding 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located.”

The proposed project is expected to generate 5.5 daily household VMT per capita and as such, would not exceed the significance threshold set forth for the Central APC area.

#### **4.2.3 Summary of Project VMT Analysis**

The net new daily vehicle trips expected to be generated by the proposed project and VMT screening assessment were forecast using the City’s latest VMT Calculator tool. Copies of the detailed City of Los Angeles VMT Calculator worksheets for the proposed project are contained in *Appendix C*. As indicated in the summary VMT Calculator worksheet, the proposed project is forecast to generate the following:

- The proposed project is estimated to generate a total of 422 net new daily vehicle trips.
- Based on the VMT Calculator, the proposed project is not expected to exceed the household VMT per capita of 6.0, which is established as 15% below the existing household VMT per capita for the Central APC area. Thus, based on the above analyses, the project is not expected to result in a significant VMT impact. Therefore, no mitigation is necessary as it relates to VMT.

#### **4.2.4 Summary of Cumulative VMT Analysis**

As stated in the City’s TAG document (refer to page 2-12 of the TAG), analyses should consider both short-term and long-term project effects on VMT. Short-term effects are evaluated in the detailed project-level VMT analysis summarized above. Long-term, or cumulative, effects are determined through a consistency check with the Southern California Association of Government’s (SCAG’s) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS is the regional plan that demonstrates compliance with air quality conformity requirements and greenhouse gas (GHG) reduction targets. As such, projects that are consistent with this plan in terms of development, location, density, and intensity, are part of the regional solution for meeting air pollution and GHG reduction goals. Projects that are deemed to be consistent would have a less than significant cumulative impact on VMT. Development in a location where the RTP/SCS does not specify any development may indicate a significant impact on transportation. However, as noted in the City’s TAG document, for projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., VMT per capita, VMT per employee, or VMT per service population) in the impact analysis, a less than significant project impact conclusion is sufficient in demonstrating there is no cumulative VMT impact. Projects that fall under the City’s efficiency-based impact thresholds are already shown to align with the long-term VMT and GHG reduction goals of SCAG’s RTP/SCS. The TAG also notes that projects which do demonstrate VMT impacts

through application of efficiency-based thresholds, and which are deemed inconsistent with the RTP/SCS, could contribute toward a significant cumulative impact on VMT.

Based on the above project-related VMT analysis and the conclusions reported in Section 4.2.3 (i.e., which conclude that the proposed project falls under the City's efficiency-based impact thresholds and thus are already shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS), no cumulative VMT impacts are anticipated.

### **4.3 Geometric Design (Threshold T-3)**

As stated in the City's TAG document (refer to page 2-19 of the TAG), impacts regarding the potential increase of hazards due to a geometric design feature generally relate to the design of access points to and from the project site, and may include safety, operational, or capacity impacts. Impacts can be related to vehicle/vehicle, vehicle/bicycle, or vehicle/pedestrian conflicts as well as to operational delays caused by vehicles slowing and/or queuing to access a project site. These conflicts may be created by the driveway configuration or through the placement of project driveway(s) in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to busy or congested intersections. Evaluation of access impacts require details relative to project land use, size, design, location of access points, etc. These impacts are typically evaluated for permanent conditions after project completion, but can also be evaluated for temporary conditions during project construction. Project access can be analyzed in qualitative and/or quantitative terms, and in conjunction with the review of internal site circulation and access to parking areas. All proposed site access points should be evaluated.

#### **4.3.1 Screening Criteria**

If the project requires a discretionary action, and the answer is "yes" to either of the following questions, further analysis will be required to assess whether the project would result in impacts due to geometric design hazards or incompatible uses:

- Is the project proposing new driveways, or introducing new vehicle access to the property from the public right-of-way?
  - ▣ Yes, the three existing driveways will be removed and a new driveway will be constructed at the northeast portion of the site to provide access to/from the site.
- Is the project proposing to make any voluntary or required modifications to the public right-of-way (i.e., street dedications, reconfigurations of curb line, etc.)?

As stated in the City's TAG document (refer to page 2-20 of the TAG), for the purpose of the screening for projects that are making physical changes to the public right-of-way, determine the street designation and improvement standard for any project frontage along streets classified as an Avenue or Boulevard (as designated in the City's General Plan) using the Mobility Plan 2035, or NavigateLA. If any street fronting the project site is an Avenue or Boulevard and it is determined that additional dedication, or physical modifications to the

public right-of-way are proposed or required, the answer to this question is yes. For projects not subject to dedication and improvement requirements under the Los Angeles Municipal Code, though the project does propose dedications or physical modifications to the public right-of-way, which may also include new physical modifications along streets classified as either Collectors or Locals, the answer to this question is yes. Based on a review of the proposed project, the following answer is provided:

- No. While the City's Bureau of Engineering (BOE) will make a final determination if any roadway dedications and/or widenings are required, based on the current street designation for Arapahoe Street as a Local roadway, it does not appear that any street dedications or reconfigurations of curb line are required.

#### **4.3.2 Impact Criteria and Methodology**

The impact criteria set forth in the City's TAG for substantially increasing hazards due to a geometric design feature or incompatible use (referred to as Threshold T-3) is defined as follows:

- Threshold T-3: 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)?
  - No, the proposed project would not substantially increase hazards due to a geometric design feature.

Preliminary project access plans are to be reviewed in light of commonly-accepted traffic engineering design standards to ascertain whether any deficiencies are apparent in the site access plans which would be considered significant. The determination of significance shall be on a case-by-case basis, considering the following factors:

- The relative amount of pedestrian activity at project access points.
- Design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists.
- The type of bicycle facilities the project driveway(s) crosses and the relative level of utilization.
- The physical conditions of the site and surrounding area, such as curves, slopes, walks, landscaping or other barriers, that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle safety hazards.
- The project location, or project-related changes to the public right-of-way, relative to proximity to the High Injury Network or a Safe Routes to School program area.

- Any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

For vehicle, bicycle and pedestrian safety impacts, the City's TAG (refer to page 28) indicate that a review of all project access points, internal circulation, and parking access from an operational and safety perspective (for example, turning radii, driveway queuing, line of sight for turns into and out of project driveway[s]) should be conducted. Where project driveways would cross pedestrian facilities or bicycle facilities (bike lanes or bike paths), operational and safety issues related to the potential for vehicle/pedestrian and vehicle/bicycle conflicts and the severity of consequences that could result should be considered. In areas with moderate to high levels of pedestrian or bicycle activity, the collection of pedestrian or bicycle count data is required.

#### **4.3.3 Qualitative Review of Site Access Points**

As the proposed project driveway location on Arapahoe Street is essentially the same as what exists under current conditions and based on a review of the forecast net new weekday AM and PM peak hour project traffic volumes (i.e., those traffic volumes are summarized in Section 2.6 herein), no safety concerns related to geometric design are noted.

#### **4.4 CEQA Transportation Measures**

##### **4.4.1 Mitigation Measures**

The proposed project is not expected to exceed the household VMT per capita of 6.0, which is established as 15% below the existing household VMT per capita for the Central APC area. Based on the VMT Calculator, the proposed project is not expected to result in a significant VMT impact. Therefore, no mitigation is necessary as it relates to VMT.

##### **4.4.2 Transportation Demand Management**

The Applicant will comply with any existing applicable City ordinances and the other requirements per the City's Municipal Code.

## 5.0 NON-CEQA ANALYSIS

The authority for requiring non-CEQA transportation analysis and potentially requiring improvements to address identified deficiencies lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the Los Angeles Municipal Code (LAMC). As provided in Section 16.05:

“The purposes of site plan review are to promote orderly development, evaluate and mitigate significant environmental impacts, and promote public safety and the general welfare by ensuring that development projects are properly related to their sites, surrounding properties, traffic circulation, sewers, other infrastructure and environmental setting; and to control or mitigate the development of projects which are likely to have a significant adverse effect on the environment as identified in the City's environmental review process, or on surrounding properties by reason of inadequate site planning or improvements.”

Additional authority is found in other City ordinances, such as certain transportation specific plans. The impacts, also referred to as deficiencies, discussed in City's TAG are not intended to be interpreted as thresholds of significance, or significance criteria for purposes of CEQA review unless otherwise specifically identified (refer to Section 2.0, CEQA Analysis of Transportation Impacts).

### 5.1 Pedestrian, Bicycle, and Transit Access

The pedestrian, bicycle, and transit facilities assessment is intended to determine a project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. The deficiencies could be physical (through removal, modification, or degradation of facilities) or demand-based (by adding pedestrian or bicycle demand to inadequate facilities).

#### 5.1.1 Screening Criteria

If the answer is yes to all of the following questions, further analysis will be required to assess whether the project would negatively affect existing pedestrian, bicycle, or transit facilities:

- Does the land use project involve a discretionary action that would be under review by the Department of City Planning?
  - ▣ Yes.
- Does the land use project include the construction, or addition of?
  - 50 (or more) dwelling units or guest rooms or combination thereof, or
  - 50,000 square feet (or more) of non-residential space

- ▣ Yes, the proposed project will contain a total of 109 apartment units with a total of 134 individual bedrooms (i.e., where the bedrooms are considered as guest rooms for purposes of this screening question).
- Would the project generate a net increase of 1,000 or more daily vehicle trips, or is the project's frontage along an Avenue, Boulevard, or Collector (as designated in the City's General Plan) 250 linear feet or more, or is the project's building frontage encompassing an entire block along an Avenue or Boulevard (as designated in the City's General Plan)?
  - ▣ No.

While the answers to all of the above screening criteria are not yes, further analysis is provided for informational purposes to review whether the proposed project would negatively affect existing pedestrian, bicycle, or transit facilities.

### **5.1.2 Evaluation Criteria**

Factors to consider when assessing a project's potential effect on pedestrian, bicycle and transit facilities, include, but are not limited to, the following:

- Would a project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities, including but not limited to:
  - ▣ Removal or degradation of existing sidewalks, crosswalks, pedestrian refuge islands, and/or curb extensions/bulb-outs
  - ▣ Removal or degradation of existing bikeways and/or supporting facilities (e.g., bikeshare stations, on-street bike racks/parking, bike corrals, etc.)
  - ▣ Removal or degradation of existing transit and/or local circulator facilities including stop, bench, shelter, concrete pad, bus lane, or other amenities
  - ▣ Removal of other existing transportation system elements supporting sustainable mobility
  - ▣ Increase street crossing distance for pedestrians; increase in number of travel/turning lanes; increase in turning radius or turning speeds
  - ▣ Removal, degradation, or narrowing of an existing sidewalk, path, crossing, or pedestrian access way
  - ▣ Removal or narrowing of existing sidewalk-street buffering elements (e.g., curb extension, parkway, planting strip, street trees, etc.)

- Would a project intensify use of existing pedestrian, bicycle, or transit facilities, including but not limited to:
  - Increase in pedestrian or vehicle volume, and thereby increase the need or attraction to cross a street at unmarked pedestrian crossings or unsignalized or uncontrolled intersections where a crossing is not available without significant rerouting. Refer to the Guidelines for Marked Crosswalks Across Uncontrolled Locations, in LADOT's Manual of Policies and Procedures (MPP) Section 344, or Guidelines for Traffic Signals in MPP Section 353 to determine approval and warrant criteria for an additional crossing.
  - Result in new pedestrian demand between project site entries/exits and major destinations or transit stops expected to serve the development where there are missing pedestrian facilities (e.g., gaps in the sidewalk network) or substandard pedestrian facilities (e.g., narrow or uneven sidewalks, no crosswalks at intersections or mid-block, no marked crossing, or push button crossing rather than actuated, etc.).
  - Increase transit demand at bus stops that lack marked crossings, with insufficient sidewalks, or are in isolated, or unlit areas.

The locations and descriptions of pedestrian, bicycle and transit facilities in the project vicinity that could be affected by project-related traffic or by users traveling between a project and nearby destinations is presented in Section 3.0 (Project Context) herein. Existing and potential pedestrian facilities and destinations located within an approximately one-quarter mile (i.e., 1,320 feet) from the project site are noted in *Figure 3-1*. In addition, transit facilities and amenities are also displayed in *Figure 3-1*. The location of the City's bicycle enhanced network (low stress network) in close proximity to the project site and in the surrounding area is shown in *Figure 3-2*. The location of the City of Los Angeles proposed bicycle lane network in close proximity to the project site and in the surrounding area is illustrated in *Figure 3-3*.

### 5.1.3 Results of Qualitative Access Review

**Table 5-1** summarizes the City's criteria associated with the two guiding questions regarding the pedestrian, bicycle, and transit access assessment and the determination of potential project-related effect on the subject facilities in the vicinity of the proposed project. The determination is based on whether the proposed project would create deficiencies that could be physical (through removal, modification, or degradation of facilities) or demand-based (by adding pedestrian or bicycle demand to inadequate facilities). As indicated in *Table 5-1*, it is determined the proposed project does not include any features that would permanently remove, adversely modify, or degrade pedestrian, bicycle, and transit facilities in the project vicinity. As also noted in *Table 5-1*, it is determined that it is possible that the proposed project may intensify use of pedestrian, bicycle, and transit facilities in the project vicinity, however, such use is not expected to result in a deficient condition caused by the project. Additionally, a qualitative assessment of the existing pedestrian, bicycle, and transit facilities in the project vicinity is included in *Table 5-1* (i.e., as part of the responses to the criteria

**TABLE 5-1  
PROJECT EVALUATION OF PEDESTRIAN, BICYCLE, AND TRANSIT ACCESS**

<b>CRITERIA</b>	<b>PROJECT RESPONSE</b>	<b>FURTHER QUANTITATIVE ASSESSMENT?</b>
<b><i>PERMANENT REMOVAL OR MODIFICATION OF FACILITIES</i></b>		
Removal or degradation of existing sidewalks, crosswalks, pedestrian refuge islands, and/or curb extensions/bulbouts	<b>No</b>	<b>No</b>
Removal or degradation of existing bikeways and/or supporting facilities (e.g., bikeshare stations, on-street bike racks/parking, bike corrals, etc.)	<b>No</b>	<b>No</b>
Removal or degradation of existing transit and/or local circulator facilities including stop, bench, shelter, concrete pad, bus lane, or other amenities	<b>No</b>	<b>No</b>
Removal of other existing transportation system elements supporting sustainable mobility	<b>No</b>	<b>No</b>
Increase street crossing distance for pedestrians; increase in number of travel/turning lanes; increase in turning radius or turning speeds	<b>No</b>	<b>No</b>
Removal, degradation, or narrowing of an existing sidewalk, path, crossing, or pedestrian access way	<b>No</b>	<b>No</b>
Removal or narrowing of existing sidewalk-street buffering elements (e.g., curb extension, parkway, planting strip, street trees, etc.)	<b>No</b>	<b>No</b>
<b><i>INTENSIFY USE OF FACILITIES</i></b>		
Increase in pedestrian or vehicle volume, and thereby increase the need or attraction to cross a street at unmarked pedestrian crossings or unsignalized or uncontrolled intersections where a crossing is not available without significant rerouting. Refer to the Guidelines for Marked Crosswalks Across Uncontrolled Locations, in LADOT's Manual of Policies and Procedures (MPP) Section 344, or Guidelines for Traffic Signals in MPP Section 353 to determine approval and warrant criteria for an additional crossing.	<b>Possible</b>	<b>No</b>
Result in new pedestrian demand between project site entries/exits and major destinations or transit stops expected to serve the development where there are missing pedestrian facilities (e.g., gaps in the sidewalk network) or substandard pedestrian facilities (e.g., narrow or uneven sidewalks, no crosswalks at intersections or mid-block, no marked crossing, or push button crossing rather than actuated, etc.).	<b>Possible</b>	<b>No</b>
Increase transit demand at bus stops that lack marked crossings, with insufficient sidewalks, or are in isolated, unshaded, or unlit areas.	<b>No</b>	<b>No</b>



questions). Based on this analysis, no project-specific actions or improvements are recommended as it relates to pedestrian, bicycle, and transit access.

## **5.2 Project Access and Circulation Review**

Project access and circulation constraints relate to the provision of access to and from the project site, and may include safety, operational, or capacity constraints. Constraints can be related to vehicular/vehicular, vehicular/bicycle, or vehicular/pedestrian constraints as well as to operational delays. These conflicts may be created by the driveway configuration or through the placement of project driveway(s) in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to an intersection or crosswalk. The project access and circulation has been evaluated for permanent conditions after project completion. *Table 5-2* summarizes the vehicle queuing analysis prepared for each of the study locations for the representative intersection traffic movements for the weekday AM and PM peak hours. *Appendix D* contains the analysis data worksheets for the study intersections.

### **5.2.1 Screening Criteria**

For land use projects, if the answer is yes to all of the following questions, further analysis will be required to assess whether the project would negatively affect project access and circulation:

- Does the land use project involve a discretionary action that would be under review by the Department of City Planning?
  - Yes, the project will require a discretionary action.
- Would the land use project generate a net increase of 250 or more daily vehicle trips?
  - Yes, the project will generate a net increase of 250 or more daily vehicle trips.

As the answer is yes to both of the screening criteria questions (i.e., the project will require a discretionary action and the project will generate more than 250 daily trips), further analysis is required to evaluate project access, safety and circulation.

### **5.2.2 Evaluation Criteria**

For operational evaluation of land use projects, the City's TAG requires a quantitative evaluation of the project's expected access and circulation operations. Project access is considered constrained if the project's traffic would contribute to unacceptable queuing on an Avenue or Boulevard (as designated in the Mobility Plan 2035) at project driveway(s) or would cause or substantially extend queuing at nearby signalized intersections. Unacceptable or extended queuing may be defined as follows:

- Spill over from turn pockets into through lanes.
- Block cross streets or alleys.

**Table 5-2  
SUMMARY OF VEHICLE QUEUING [1]  
WEEKDAY AM AND PM PEAK HOURS**

NO.	INTERSECTION	TRAFFIC CONTROL	MOVEMENT	PEAK HOUR	95th PERCENTILE QUEUES (FEET PER LANE) [2]			CHANGE IN QUEUE [3]
					EXISTING	YEAR 2024 FUTURE W/O PROJECT	YEAR 2024 FUTURE W/ PROJECT	
1	Elden Avenue/ Olympic Boulevard	Signalized	EB Left	AM	5	5	5	0
				PM	8	8	8	0
			WB Left	AM	3	5	5	0
				PM	25	33	33	0
2	Arapahoe Street/ San Marino Street	Unsignalized	NB Left/Right	AM	8	8	10	2
				PM	5	8	8	0
			EB Thru/Right	AM	0	0	0	0
				PM	0	0	0	0
			WB Thru/Left	AM	3	3	3	0
				PM	3	3	3	0
3	Arapahoe Street/ Olympic Boulevard	Unsignalized	EB Left	AM	3	5	5	0
				PM	5	8	8	0
			WB Left	AM	30	38	38	0
				PM	25	33	33	0
4	Hoover Street/ Olympic Boulevard	Signalized	NB Left	AM	120	128	133	5
				PM	185	198	215	17
			SB Left	AM	778	943	943	0
				PM	763	875	875	0
			EB Left	AM	310	360	360	0
				PM	230	305	305	0
			WB Left	AM	70	73	73	0
				PM	80	80	80	0

- [1] Pursuant to LADOT's *Transportation Assessment Guidelines*, July 2020, the Highway Capacity Manual (HCM) methodology for signalized and unsignalized study intersections was utilized to calculate vehicle queuing.
- [2] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The HCM 6th Edition methodology worksheets report queues in number of vehicles per lane, however an average vehicle length of 25 feet was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet per lane.
- [3] Represents the change in calculated maximum back of queue (in feet per lane) due to the addition of project-related traffic.

- Contribute to gridlock congestion. For the purposes of this section, “gridlock” is defined as the condition where traffic queues between closely-spaced intersections and impedes the flow of traffic through upstream intersections.

For land use and transportation projects, the City’s TAG also requires identification as to whether project-related traffic queuing is expected to increase traffic diversion so as to burden neighborhood streets if the proposed project is located in proximity to residential areas (refer to TAG Section 3.5). Since nearby residential streets do not offer to congested access routes to/from the project site, no residential street cut-through analysis is required as part of this transportation assessment report.

The City’s TAG acknowledges that demand for curbside space has substantially increased due to the continued expansion of driver-for-hire transportation network companies (TNCs) and shared mobility services. As such, the TAG states that a transportation assessment should characterize the on-site loading demand of the project frontage and answer the following questions:

- Would the project result in passenger loading demand that could not be accommodated within any proposed on-site passenger loading facility?
  - ▣ Not Anticipated. While it is envisioned that passenger loading/unloading will occur on-site within the subterranean parking garage, it is envisioned that some curbside loading/unloading would likely occur along the Arapahoe Avenue project frontage.
- Would accommodating the passenger loading demand create pedestrian or bicycle conflicts? Which curbside management options should be explored to better address passenger loading needs in the public right-of-way?
  - ▣ No pedestrian or bicycle conflicts due to potential loading/unloading activities are anticipated to occur. For any curbside loading/unloading zones that may be proposed by the Applicant, appropriate signage and pavement/curb markings will be required by the City and installed by the Applicant. Any installations that fall within the City’s (public) right-of-way will require prior review and approval by LADOT.

### **5.2.3 Operational and Passenger Loading Evaluation Methodology**

Based on coordination with LADOT staff and as presented in the transportation assessment MOU, the following four (4) study intersections were identified for operational evaluation of whether the project’s traffic would contribute to unacceptable queuing on an Avenue or Boulevard:

1. Elden Avenue/Olympic Boulevard
2. Arapahoe Street/San Marino Street
3. Arapahoe Street/Olympic Boulevard
4. Hoover Street/Olympic Boulevard

Two of the four study locations are currently controlled with traffic signals. The study locations were determined based on proximity to the proposed project site and its driveway location on Arapahoe Street, and the importance of the intersections in terms of the project's site access and circulation scheme.

The analysis was prepared based on the *Highway Capacity Manual*<sup>9</sup> (HCM) operational analysis methodology pursuant to the City's TAG. Intersection analyses were prepared utilizing the *Synchro II* software package, which implements the Highway Capacity Manual operational methods. A *Synchro* network was created based on existing conditions field reviews at the above four study intersections. In addition, specifics such as traffic volume data, lane configurations, available vehicle storage lengths, crosswalk locations, posted speed limits, traffic signal timing and phasing for signalized locations, etc., were coded to complete the roadway network. The operational analysis was prepared utilizing the following data previously presented herein:

- Project Peak Hour Traffic Generation: Refer to Subsection 2.6.1
- Project Trip Distribution and Assignment: Refer to Subsection 2.6.2
- Existing Roadway Network: Refer to Subsection 3.3
- Existing Weekday AM and PM Hour Traffic Count Data: Refer to Subsection 3.4
- Related Projects (i.e., with a one-half mile radius) and Ambient Traffic Growth: Refer to Subsection 3.5

LADOT confirmed the appropriateness of the above data when it entered into a transportation assessment MOU for the proposed project.

The operational analysis of vehicle queuing at the study intersections was prepared for the following conditions:

- [a] Existing conditions.
- [b] Condition [a] plus one percent (1.0%) annual ambient traffic growth through year 2024 (i.e., project build-out) and with completion and occupancy of the related projects (i.e., future without project conditions).
- [c] Condition [b] with completion and occupancy of the proposed project.

Pursuant to the City's TAG, the HCM methodology for signalized and unsignalized intersections was utilized to calculate vehicle queuing. The operational analysis reports the 95<sup>th</sup> percentile queues (in feet) for all approaches for the signalized intersections and unsignalized intersections. The 95<sup>th</sup>

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<sup>9</sup> *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.

percentile queue is the maximum back of queue with 95<sup>th</sup> percentile traffic volumes. The HCM 6<sup>th</sup> Edition methodology worksheets report queues in number of vehicles. As such, an average vehicle length of 25 feet, which includes the length of the vehicle and spacing between vehicles, was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet. The summary of the operational analysis of the study intersections is provided in *Table 5-2*. The HCM methodology worksheets for the analyzed intersections are contained in *Appendix D*.

#### **5.2.4 Results of Operational and Passenger Loading Evaluation**

As presented in *Table 5-2*, it is concluded the proposed project weekday AM and PM peak hour traffic volumes will not cause or substantially extend vehicle queuing at the four study intersections. The change in queue length associated with the proposed project at the signalized intersections ranges from no change to a maximum of 17 feet (i.e., less than one vehicle/car length). Based on the results of the operation evaluation, no recommended actions are necessary as it relates to project access.

While it is envisioned that passenger loading/unloading will occur on-site within the subterranean parking garage, it is envisioned that some curbside loading/unloading would likely occur along the Arapahoe Street project frontage. No pedestrian or bicycle conflicts due to potential loading/unloading activities are anticipated to occur. For any curbside loading/unloading zones that may be proposed by the Applicant, appropriate signage and pavement/curb markings will be required by the City and installed by the Applicant. Any installations that fall within the City's (public) right-of-way will require prior review and approval by LADOT.

### **5.3 Project Construction Effect on Nearby Mobility**

The project construction evaluation addresses activity associated with project construction and major in-street construction of infrastructure projects.

#### **5.3.1 Screening Criteria**

For land use projects, if the answer is yes to any of the following questions, further analysis will be required to assess whether project construction would negatively affect pedestrian, bicycle, transit, or vehicle circulation:

- Would a project that requires construction activities to take place within the right-of-way of a Boulevard or Avenue (as designated in the Mobility Plan 2035) which would necessitate temporary lane, alley, or street closures for more than one day (including day and evening hours, and overnight closures if on a residential street)?
  - ▣ As a general contractor has not yet been hired at this point in the entitlement process, it is indeterminant if any construction activity would require a temporary lane closure along Avenue II roadways. Further, the project is not located along an Avenue II roadway.

- Would a project require construction activities to take place within the right-of-way of a Collector or Local Street (as designated in the Mobility Plan 2035) which would necessitate temporary lane, alley, or street closures for more than seven days (including day and evening hours, and including overnight closures if on a residential street)?
  - ▣ No.
- Would in-street construction activities result in the loss of regular vehicle, bicycle, or pedestrian access, including loss of existing bicycle parking to an existing land use for more than one day, including day and evening hours and overnight closures if access is lost to residential units?
  - ▣ No. It is expected that the construction of the new driveway approach will not require a full sidewalk closure.
- Would in-street construction activities result in the loss of regular ADA pedestrian access to an existing transit station, stop, or facility (e.g., layover zone) during revenue hours?
  - ▣ No.
- Would in-street construction activities result in the temporary loss for more than one day of an existing bus stop or rerouting of a bus route that serves the project site?
  - ▣ No.
- Would construction activities result in the temporary removal and/or loss of on-street metered parking for more than 30 days?
  - ▣ No.
- Would the project involve a discretionary action to construct new buildings or additions of more than 1,000 square feet that require access for hauling construction materials and equipment from streets of less than 24-feet wide in a hillside area?
  - ▣ No.

As the answer is no to all of the screening criteria questions, further analysis is not required to evaluate whether project construction would negatively affect pedestrian, bicycle, transit, or vehicle circulation. However, a review of whether the proposed project would adversely affect mobility in the project area during the construction process is presented in the following subsections.

### **5.3.2 Evaluation Criteria and Methodology**

The evaluation criteria for project construction are focused on whether the proposed project would adversely affect mobility in the project vicinity during the construction process. Specifically, the City's TAG asks the following question: "Would construction of a project substantially interfere

with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas?” Factors to be considered are the location of the project site, the functional classification of the adjacent street(s), the availability of alternate routes or additional capacity, temporary loss of bicycle parking, the operational constraints of the streets needed to access the construction sites in hillside areas that inhibit access by other residents and emergency service responders, the affected land uses, and the magnitude of the temporary construction activities.

Factors to consider when assessing a project construction’s potential effect on mobility in the project area include the following:

- Temporary transportation constraints:
  - ▣ The length of time of temporary street closures or closures of two or more travel lanes;
  - ▣ The classification of the street (major arterial, state highway) affected;
  - ▣ The existing congestion levels on the affected street segments and intersections;
  - ▣ The operational constraints of substandard hillside streets needing to access construction sites;
  - ▣ Whether the affected street directly leads to a freeway on- or off-ramp or other state highway, substandard hillside local or collector, etc.) affected;
  - ▣ Potential safety issues involved with street or lane closures; and
  - ▣ The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street.
- Temporary loss of access:
  - ▣ The length of time of any loss of pedestrian or bicycle circulation past a construction area;
  - ▣ The length of time of any loss of vehicular, bicycle, or pedestrian access to a parcel fronting the construction area;
  - ▣ The length of time of any loss or impedance of access by emergency vehicles or area residents to hillside properties;
  - ▣ The length of time of any loss of ADA pedestrian access to a transit station, stop, or facility;

- The availability of nearby vehicular or pedestrian access within ¼ mile of the lost access; and
  - The type of land uses affected, and related safety, convenience, and/or economic issues.
- Temporary Loss of Bus Stops or Rerouting of Bus Lines:
  - The length of time that an existing bus stop would be unavailable or that existing service would be interrupted;
  - The availability of a nearby location (within ¼ mile) to which the bus stop or route can be temporarily relocated;
  - The existence of other bus stops or routes with similar routes/destinations within a ¼-mile radius of the affected stops or routes; and
  - Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s).

Descriptions of the project location and physical setting are provided in Subsection 2.1, Project Location, and Section 3.0, Project Context, herein for reference purposes in the project construction evaluation. The project location and project setting data items such as adjacent street classifications, public bicycle parking, inventory of existing transit lines, bus stops, etc. are provided in Section 3.0. The evaluation of the project construction includes a review of whether construction activity within the street right-of-way would require any of the following:

- Street, sidewalk, or lane closures.
- Block existing vehicle, bicycle, or pedestrian access along a street or to parcels fronting the street.
- Modification of access to transit stations, stops, or facilities during revenue hours.
- Closure or movement of an existing bus stop or rerouting of an existing bus line.
- Creation of transportation hazards.

The TAG also notes that for construction on hillside properties that exceed the screening criteria, review of the hillside streets needed for access to the property for hauling materials and equipment is necessary in order to determine if temporary access would be constrained during project construction. This assessment should:

- Map the full extent of routes within hillside areas used for hauling materials and equipment that need to access the property from non-hillside areas.



- Identify any portion of a street along those routes that are less than 24 feet in width curb to curb.
- Identify the portion of routes used for hauling that are less than 24 feet in width and are in a Very High Fire Severity Hazard Zone.
- Identify the availability, regulatory limits, and the existing use of on-street parking supply along those routes that are less than 24 feet in width.
- Collect the existing peak hour volumes from between 8:00 AM to 6:00 PM along those routes that are less than 24 feet in width within hillside areas.
- Evaluate the cumulative effects on emergency access, deliveries, residential circulation, and street parking from other construction activity from both ministerial and other discretionary projects (related projects) with overlapping construction schedules and that are located within a ½ mile radius from the project site.

The City's TAG notes that a comparison of the results to the evaluation criteria are to be provided in order to determine the level of impact. The summary of the project construction evaluation criteria review in order to determine level of impact is provided in *Table 5-3*.

### **5.3.3 Summary of Results of Qualitative Review of Project Construction**

As presented in *Table 5-3*, it is concluded the proposed project would not result in the closure of two or more travel lanes, would not relocate existing bus transit stops or routes, and would not impede emergency access. Further, as required by the State of California Vehicle Code (i.e., specifically Section 21806, Authorized Emergency Vehicles), "upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet in front of a vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following:

- (a) (1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain stopped until the authorized emergency vehicle has passed.
- (2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety.
- (b) The operator of every street car shall immediately stop the street car, clear of any intersection, and remain stopped until the authorized emergency vehicle has passed.

**TABLE 5-3  
QUALITATIVE REVIEW OF PROJECT CONSTRUCTION ACTIVITIES**

CRITERIA	PROJECT RESPONSE	DESCRIPTION
<b>TEMPORARY TRANSPORTATION CONSTRAINTS</b>		
The length of time of temporary street closures or closures of two or more travel lanes	No formal street closures are anticipated.	When the general contractor is retained this will be confirmed.
The classification of the street (major arterial, state highway) affected	Local	Arapahoe Street is classified as a Local roadway.
The existing congestion levels on the affected street segments and intersections	Acceptable LOS	N/A
Whether the affected street directly leads to a freeway on- or off-ramp or other state highway	N/A	N/A
Potential safety issues involved with street or lane closures	None	N/A
The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street	None	N/A
<b>TEMPORARY LOSS OF ACCESS</b>		
The length of time of any loss of pedestrian or bicycle circulation past a construction area	None	When the general contractor is retained this will be confirmed.
The length of time of any loss of vehicular, bicycle, or pedestrian access to a parcel fronting the construction area	None	"
The length of time of any loss of ADA pedestrian access to a transit station, stop, or facility	None	"
The availability of nearby vehicular or pedestrian access within ¼ mile of the lost access	None	"
The type of land uses affected, and related safety, convenience, and/or economic issues	None	Access will be maintained for adjacent parcels in the project vicinity
<b>TEMPORARY LOSS OF BUS STOPS OR REROUTING OF BUS LINES</b>		
The length of time that an existing bus stop would be unavailable or that existing service would be interrupted	None	N/A
The availability of a nearby location (within ¼ mile) to which the bus stop or route can be temporarily relocated	N/A	N/A
The existence of other bus stops or routes with similar routes/destinations within a ¼-mile radius of the affected stops or routes	N/A	N/A
Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s)	N/A	N/A

- (c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed.”<sup>10</sup>

During construction of the proposed project, it is expected that emergency vehicles will continue to utilize the surrounding street system (i.e., particularly Olympic Boulevard) even though a travel lane along certain portions of some roadways may be temporarily used for construction purposes. If required, drivers of emergency vehicles are also trained to utilize center turn lanes, or travel in opposing through lanes (on two-way streets) to pass through crowded intersections or streets. Thus, the respect entitled to emergency vehicles and driver training allow emergency vehicles to negotiate typical street conditions in urban areas including areas near any temporary travel lane closure(s). Construction activities associated with the proposed project are not expected to have a detrimental effect on emergency response times. Therefore, effects to emergency access during project construction would be less than significant.

Having stated the above, the following section summarizes recommendations pertaining to construction activities.

## **5.4 Non-CEQA Transportation Measures**

Due to the short-term nature of construction activities and the variable characteristics and needs of a specific project’s construction phase(s), it is recommended that a construction work site traffic control plan be submitted to LADOT’s Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of construction activity. The construction work site traffic control plan is required to identify the location of all temporary roadway lane and/or sidewalk closures needed during project construction. Additionally, if pedestrian detours and/or temporary travel lane closures are proposed, LADOT requires submission and approval of a traffic control/management plan prior to the issuance of building permits.

Consistent with LADOT’s recommendation and requirements, the project applicant would prepare a detailed Construction Staging and Traffic Management Plan (CSTMP), which would include any applicable street/lane/sidewalk closure information, a detour plan, haul route(s), and a staging plan. The plan would be based on the nature and timing of the Project’s specific construction activities and would consider other projects under construction in the immediate vicinity of the Project Site. The CSTMP also would include features such as notification to adjacent project owners and occupants of upcoming construction activities, advance notification regarding any temporary transit stop relocations, and limitation of any potential roadway lane closure(s) to off-peak travel periods, to the extent feasible.

---

<sup>10</sup> Source: State of California Department of Motor Vehicles website; <https://www.dmv.ca.gov/portal/dmv>; Amended Sec. 68, Ch. 1154, Stats 1996 Effective September 30, 1996.

Specifically, the CSTMP will include, but not be limited to, the following measures:

- Advance notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.
- Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways (e.g., flag men).
- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets.
- Potential sequencing of construction activity for the Project to reduce the amount of construction-related traffic on arterial streets.
- Containment of construction activity within the Project Site boundaries, per the Worksite Traffic Control Plan.
- Prohibition on construction-related vehicles/equipment parking on surrounding public streets.
- Coordination with Metro to address any potential conflicts with existing transit service.
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Schedule delivery of construction materials and hauling/transport of oversize loads to non-peak travel periods, to the extent possible. No hauling or transport shall be allowed during nighttime hours, Sundays, or federal holidays unless required by Caltrans or LADOT.
- Installation of appropriate traffic signs around the project site to ensure pedestrian, bicycle, and vehicle safety, as may be necessary.
- Installation of truck crossing signs within 300 feet of the exit of the Project Site in each direction.
- Securing of loads by trimming and watering or covering to prevent the spilling or blowing of the earth material.
- Cleaning of trucks and loads at the export site to prevent blowing dirt and spilling of loose earth.
- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested party during site preparation, grading, and construction.

- Obtain a Caltrans transportation permit for use of oversized transport vehicles on Caltrans facilities, if needed.

Any lane closures are expected to occur outside of the weekday AM and PM commute peak hours, however, so as to maintain roadway capacity when the street system is typically most heavily constrained.

In addition to the CSTMP, approvals required by the City of Los Angeles for implementation of the proposed project include a Truck Haul Route program. The proposed haul routes would require review and approval by the City of Los Angeles.

## 6.0 SUMMARY AND CONCLUSIONS

- ***Project Description*** – The proposed project consists of the development of a five-story multi-family residential housing building planned to contain a total of 109 units. The residential unit mix will consist of 103 studios/one-bedroom units, 4 two-bedroom units, and 2 four-bedroom units. The residential building will contain various residential amenities for the use by the residents and their guests, such as a sundeck, fitness center, courtyard with fire pit, multi-purpose lounge, and common workspace area. The proposed project is planned to provide a total of 59 vehicular parking spaces, including three handicap accessible spaces, 34 standard spaces, four compact spaces, and 18 electric vehicle (EV) spaces, along with bicycle storage and general storage areas in a subterranean parking garage level. The planned vehicular parking supply complies with the project per the City of Los Angeles TOC guidelines requirement of 0.5 spaces per unit ( $109 \times 0.5 = 55$  spaces) with no vehicle parking reduction by bicycle parking offset. Also, a total of 90 bicycle parking spaces including 80 long-term and 10 short-term bicycle parking spaces are planned to be provided in compliance with the requirements set forth in the Los Angeles Municipal Code (i.e., 80 long-term spaces required, 8 short-term spaces required). Construction and occupancy of the proposed project is expected by the year 2024 (i.e., project build-out year 2024).
- ***Study Scope*** – This transportation assessment (i) presents a CEQA assessment of project-related VMT, (ii) provides a CEQA assessment of whether the project conflicts or is inconsistent with local plans and policies, (iii) presents a non-CEQA assessment of pedestrian, bicycle and transit access, (iv) provides a non-CEQA evaluation of project access, safety and circulation, (v) provides a non-CEQA review of project construction activities, and (vi) recommends mitigation and improvement measures, where necessary. As defined by the City as Lead Agency under CEQA, LADOT confirmed the appropriateness of the analysis criteria when it entered into a transportation assessment MOU for the proposed project.
- ***Project Trip Generation*** – The proposed project is expected to generate a net increase of 37 vehicle trips (9 inbound trips and 28 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate a net increase of 40 vehicle trips (24 inbound trips and 16 outbound trips).
- ***CEQA Analysis***
  - ***Project Consistency with Local Plans and Policies:*** The proposed project has been found to be consistent with the relevant City plans, policies and programs and does not include any features that would preclude the City from completing and complying with these guiding documents and policy objectives. Further, the Applicant will comply with existing applicable City ordinances and the other requirements pursuant to the City's Municipal Code.
  - ***VMT Analysis:*** The project is not expected to result in a significant VMT impact. Further, based on the project-related VMT analysis and the conclusions reported in Section 4.2.3 (i.e.,

which conclude that the proposed project falls under the City's efficiency-based impact thresholds and thus are already shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS), no cumulative VMT impacts are anticipated.

- *Geometric Design Review:* As the proposed project driveway location is consolidating the driveways what exists under current conditions and based on a review of the forecast net new weekday AM and PM peak hour project traffic volumes (i.e., those traffic volumes are summarized in Section 2.6 herein), no safety concerns have been noted related to geometric design. The following traffic management measures are recommended to facilitate access to and from the planned project site:
  - Install appropriate pavement markings (i.e., stop bar with STOP legend) on the project site exit drive aisle just west of the public sidewalks along Arapahoe Street to ensure that motorists stop prior to the sidewalk before exiting the site.
  - Install a "STOP" sign facing exiting driveway motorists to enforce the pavement markings.
- *CEQA Transportation Measures:* The proposed project is not expected to result in a significant VMT impact. Therefore, no mitigation is necessary as it relates to VMT or geometric design. However, the Applicant will comply with existing applicable City ordinances and the other requirements per the City's Municipal Code.

- ***Non-CEQA Analysis***

- *Pedestrian, Bicycle, and Transit Access:* It is determined the proposed project does not include any features that would permanently remove, adversely modify, or degrade pedestrian, bicycle, and transit facilities in the project vicinity. As noted herein, it is determined that it is possible that the proposed project may intensify use of pedestrian, bicycle, and transit facilities in the project vicinity, however, such use is not expected to result in a deficient condition caused by the project.
- *Project Access and Circulation Review:* It is concluded the proposed project weekday AM and PM peak hour traffic volumes will not cause or substantially extend vehicle queuing at the four (4) study intersections.
- *Project Construction Effect on Nearby Mobility:* While it is concluded the proposed project would not result in the closure of two or more travel lanes, would not relocate existing bus transit stops or routes, and would not impede emergency access, it is recommended that a construction work site traffic control plan be submitted to LADOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of construction activity should any lane closure/s be proposed. Consistent with LADOT's recommendation and requirements, the project applicant would also prepare a

detailed Construction Staging and Traffic Management Plan, which includes any applicable street/lane/sidewalk closure information, a detour plan, haul route(s), and a staging plan.

- *Non-CEQA Transportation Measures:* For any curbside loading/unloading zones that may be proposed by the Applicant, appropriate signage and pavement/curb markings will be required by the City and installed by the Applicant. Any installations that fall within the City's (public) right-of-way will require prior review and approval by LADOT.



## **APPENDIX A**

### **TRANSPORTATION ASSESSMENT MEMORANDUM OF UNDERSTANDING**

## Transportation Assessment Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Assessment for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Assessment Guidelines:

### I. PROJECT INFORMATION

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Project Description: \_\_\_\_\_

LADOT Project Case Number: CEN22-53325 Project Site Plan attached? (Required) ☐ Yes ☐ No

[Refer to Figure 2-2.](#)

### II. TRANSPORTATION DEMAND MANAGEMENT (TDM) MEASURES

Select any of the following TDM measures, which may be eligible as a Project Design Feature<sup>1</sup>, that are being considered for this project:

<input type="checkbox"/> Reduced Parking Supply <sup>2</sup>	<input type="checkbox"/> Bicycle Parking and Amenities	<input type="checkbox"/> Parking Cash Out
--	--	---

List any other TDM measures (e.g. bike share kiosks, unbundled parking, microtransit service, etc.) below that are also being considered and would require LADOT staff's determination of its eligibility as a TDM measure. LADOT staff will make the final determination of the TDM measure's eligibility for this project.

- |         |         |
|---------|---------|
| 1 _____ | 4 _____ |
| 2 _____ | 5 _____ |
| 3 _____ | 6 _____ |

### III. TRIP GENERATION

Trip Generation Rate(s) Source: ITE 10th Edition / Other ITE 221 Multifamily Housing (Mid-Rise)

Trip Generation Adjustment (Exact amount of credit subject to approval by LADOT)	Yes	No
Transit Usage	<input type="checkbox"/>	<input type="checkbox"/>
Existing Active or Previous Land Use	<input type="checkbox"/>	<input type="checkbox"/>
Internal Trip	<input type="checkbox"/>	<input type="checkbox"/>
Pass-By Trip	<input type="checkbox"/>	<input type="checkbox"/>
Transportation Demand Management (See above)	<input type="checkbox"/>	<input type="checkbox"/>

Trip generation table including a description of the existing and proposed land uses, rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? (Required) ☐ Yes ☐ No

[Refer to Table 2-1 & VMT](#)

	IN	OUT	TOTAL
AM Trips	_____	_____	_____
PM Trips	_____	_____	_____

NET Daily Vehicle Trips (DVT) _____ DVT (ITE ____ ed.) _____ DVT (VMT Calculator ver. ____ )
--

[Refer to Figure 6-2, Project Trip Distribution and Figures 2-7 & 2-8 Weekday AM/PM Project Traffic Volumes](#)

<sup>1</sup> At this time Project Design Features are only those measures that are also shown to be needed to comply with a local ordinance, affordable housing incentive program, or State law.

<sup>2</sup> Select if reduced parking supply is pursued as a result of a parking incentive as permitted by the City's Bicycle Parking Ordinance, State Density Bonus Law, or the City's Transit Oriented Community Guidelines.

#### IV. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: \_\_\_\_\_ Ambient Growth Rate: \_\_\_\_\_ % Per Yr. [Refer to Table 3-3 & Figure 3-8](#)

Related Projects List, researched by the consultant and approved by LADOT, attached? (Required) ☒ Yes ☐ No

STUDY INTERSECTIONS and/or STREET SEGMENTS:

(May be subject to LADOT revision after access, safety, and circulation evaluation.)

1 \_\_\_\_\_ 4 \_\_\_\_\_  
2 \_\_\_\_\_ 5 \_\_\_\_\_  
3 \_\_\_\_\_ 6 \_\_\_\_\_

Provide a separate list if more than six study intersections and/or street segments.

Is this Project located on a street within the High Injury Network? ☐ Yes ☐ No [Refer to Figure 3-6](#)

If a study intersection is located within a ¼-mile of an adjacent municipality's jurisdiction, signature approval from said municipality is required prior to MOU approval.

#### V. ACCESS ASSESSMENT

- Does the project exceed 1,000 net DVT? ☐ Yes ☐ No
- Is the project's frontage 250 linear feet or more along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☐ No
- Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☐ No

#### VI. ACCESS ASSESSMENT CRITERIA

If Yes to any of the above questions a., b., or c., complete **Attachment C.1: Access Assessment Criteria**.

#### VII. SITE PLAN AND MAP OF STUDY AREA [Refer to Figure 1-1, 2-2, 2-7 & 2-8](#)

Please note that the site plan should also be submitted to the Department of City Planning for cursory review.

Does the attached site plan and/or map of study area show	Yes	No	Not Applicable
Each study intersection and/or street segment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Project Vehicle Peak Hour trips at each study intersection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Project Vehicle Peak Hour trips at each project access point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Project trip distribution percentages at each study intersection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project driveways designed per LADOT MPP 321 (show widths and directions or lane assignment)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pedestrian access points and any pedestrian paths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pedestrian loading zones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery loading zone or area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle parking onsite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle parking offsite (in public right-of-way)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*For mixed-use projects, also show the project trips and project trip distribution by land use category.

### VIII. FREEWAY SAFETY ANALYSIS SCREENING

Will the project add 25 or more trips to any freeway off-ramp in either the AM or PM peak hour? ☐ YES ☐ NO

Provide a brief explanation or graphic identifying the number of project trips expected to be added to the nearby freeway off-ramps serving the project site. If Yes to the question above, a freeway ramp analysis is required.

*Refer to Figures 2-7 and 2-8. The nearest freeway off-ramps are located east of the project site. Project volumes on Olympic Boulevard east of Hoover Street are expected to be below 25 trips during the AM and PM peak hours.*

### IX. CONTACT INFORMATION

CONSULTANT

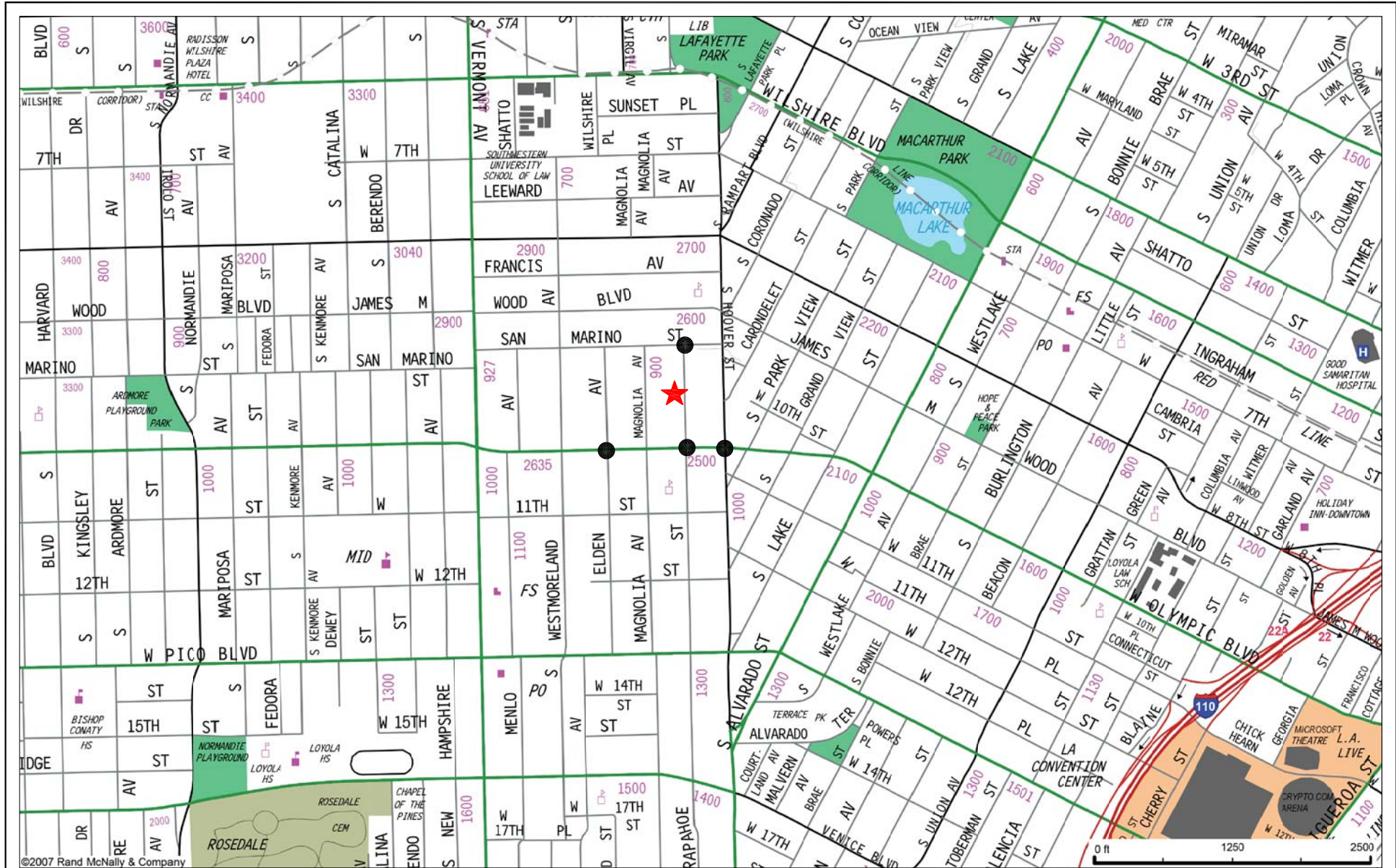
DEVELOPER

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Approved by: x <u>Chin Taing</u> <div style="text-align: center; font-size: small;">Consultant's Representative</div>	<u>5/20/22</u> <div style="text-align: center; font-size: small;">Date</div>	x <u>Eileen Hunt</u> <div style="text-align: center; font-size: small;">LADOT Representative</div>	<u>5/20/22</u> <div style="text-align: center; font-size: small;">**Date</div>
Adjacent Municipality: _____			
Approved by: _____ <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(if applicable)</span> <span>Representative</span> <span>Date</span> </div>			

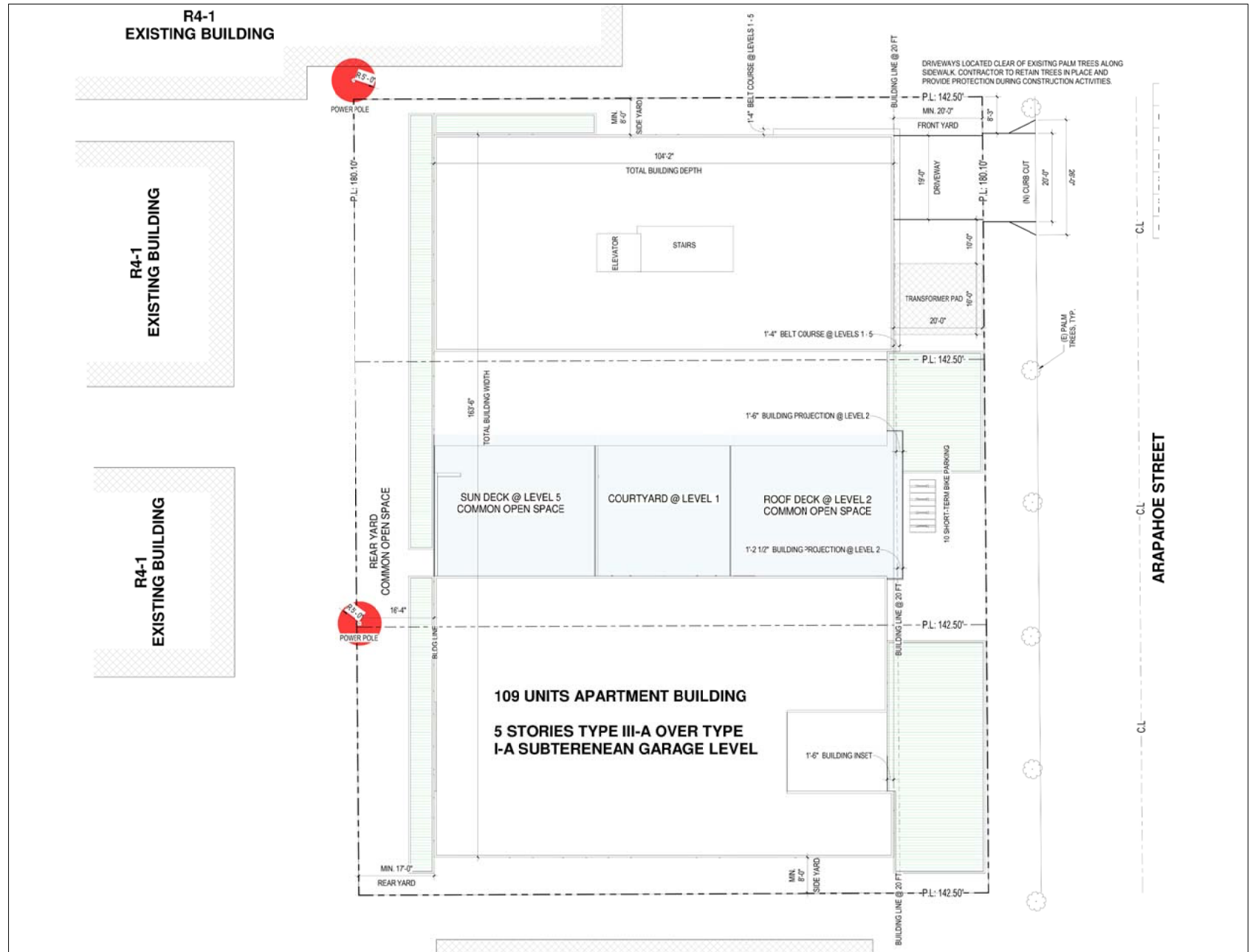
**\*\*MOUs are generally valid for two years after signing. If after two years a transportation assessment has not been submitted to LADOT, the developer's representative shall check with the appropriate LADOT office to determine if the terms of this MOU are still valid or if a new MOU is needed.**

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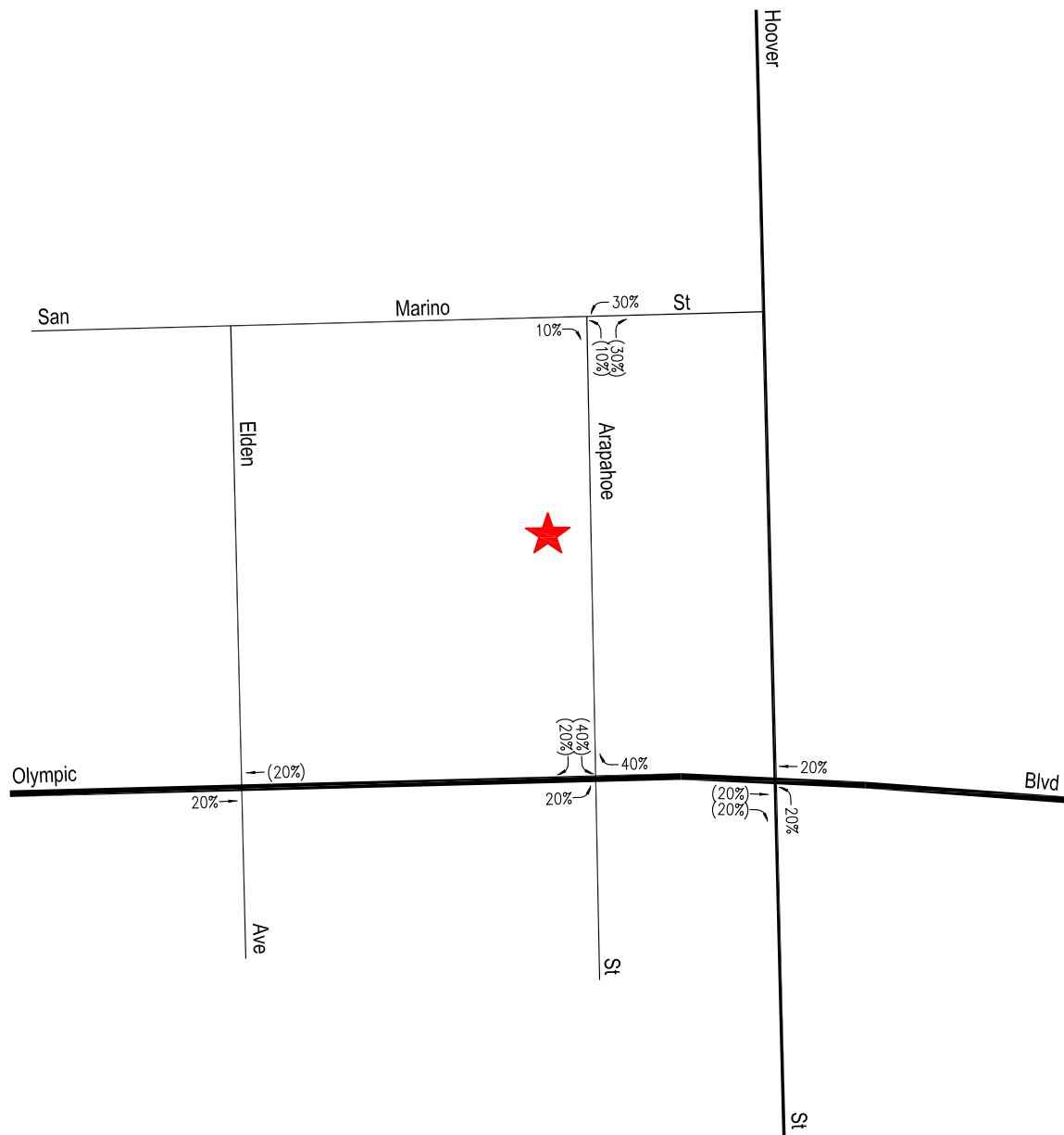




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Project Site

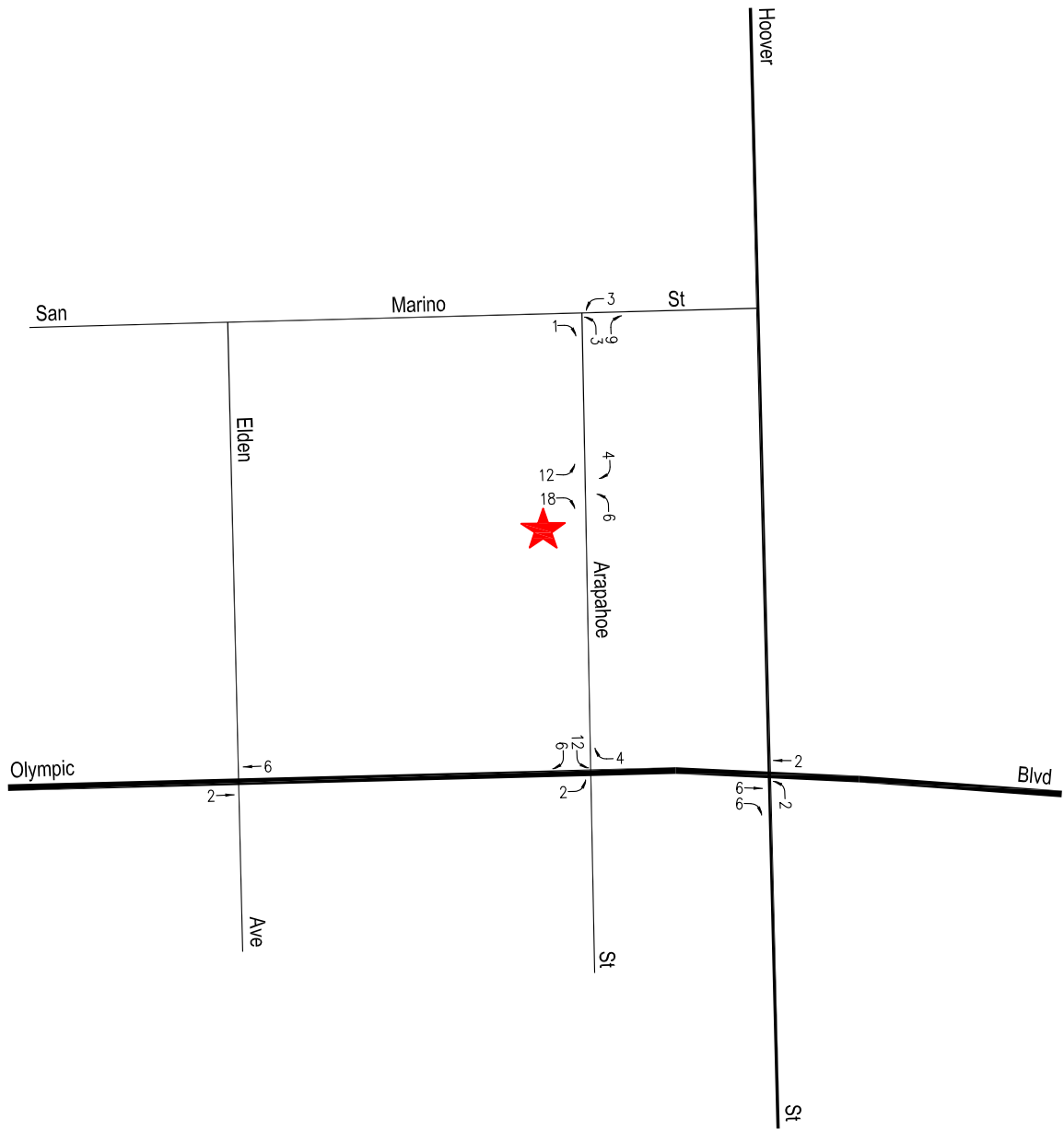
XX = Inbound Percentage

(XX) = Outbound Percentage

Figure 2-6  
Project Trip Distribution

Arapahoe Apartments Project

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c:\job\_file\4472\dwg\2-8.dwg 05/09/2022 12:05:01 rodriguez

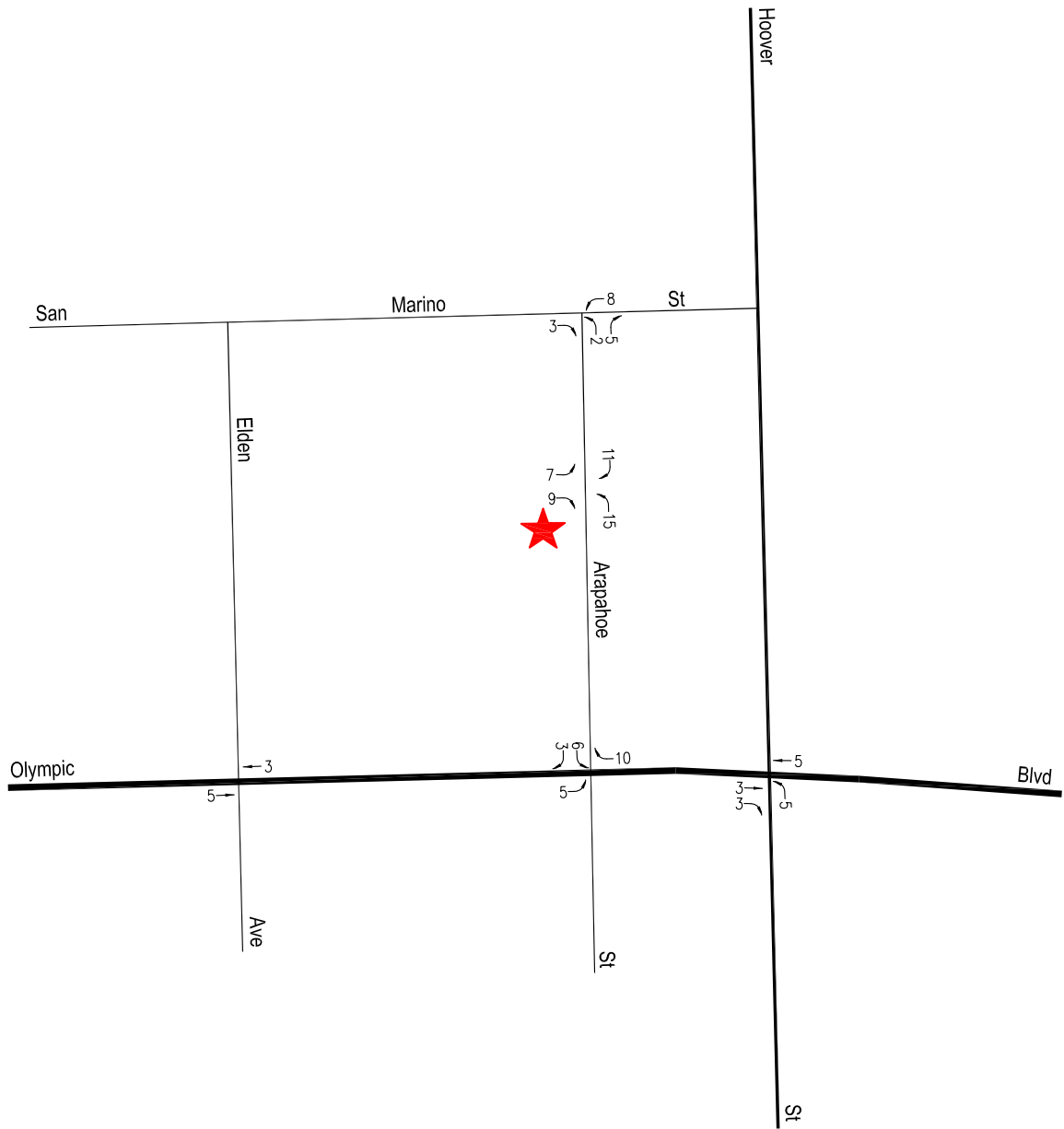


Table 2-1  
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
ITE LAND USE CATEGORY	ITE LAND USE CODE	VARIABLE	WEEKDAY DAILY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
				IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Single-Family Detached Housing	210	Per Dwelling Unit	9.43	26%	74%	0.70	63%	37%	0.94
Multifamily Housing (Low Rise) [Not Close to Rail]	220	Per Dwelling Unit	6.74	24%	76%	0.40	63%	37%	0.51
Multifamily Housing (Mid Rise) [Not Close to Rail] [3]	221	Per Dwelling Unit	4.54	23%	77%	0.37	61%	39%	0.39

PROJECT TRIP GENERATION FORECAST									
LAND USE	ITE LAND USE CODE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				IN	OUT	TOTAL	IN	OUT	TOTAL
<b><u>Proposed Project</u></b>									
Apartments [3]	221	109 DU	495	9	31	40	26	17	43
<b><i>Subtotal Proposed Project</i></b>			<b><i>495</i></b>	<b><i>9</i></b>	<b><i>31</i></b>	<b><i>40</i></b>	<b><i>26</i></b>	<b><i>17</i></b>	<b><i>43</i></b>
<b><u>Existing Uses</u></b>									
Single-Family Residential	210	(2) DU	(19)	0	(1)	(1)	(1)	(1)	(2)
<b><i>Subtotal Existing Uses</i></b>			<b><i>(19)</i></b>	<b><i>0</i></b>	<b><i>(1)</i></b>	<b><i>(1)</i></b>	<b><i>(1)</i></b>	<b><i>(1)</i></b>	<b><i>(2)</i></b>
<b><i>NET NEW PROJECT TRIPS</i></b>			<b><i>476</i></b>	<b><i>9</i></b>	<b><i>30</i></b>	<b><i>39</i></b>	<b><i>25</i></b>	<b><i>16</i></b>	<b><i>41</i></b>

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.  
[2] Trips are one-way traffic movements, entering or leaving.  
[3] ITE Land Use Code 221 Multifamily Housing (Mid-Rise) Not Close to Rail Transit trip generation average rates for General Urban/ Suburban area.

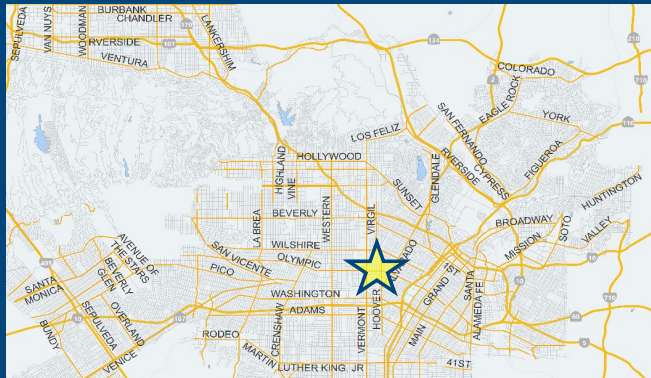
# CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



*Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?*

## Project Information

**Project:** Arapahoe Apartments  
**Scenario:**  
**Address:** 957 S ARAPAHOE ST, 90006



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☒ Yes ☐ No

## Existing Land Use

Land Use Type	Value	Unit
Housing   Single Family	2	DU

☐ Click here to add a single custom land use type (will be included in the above list)

## Proposed Project Land Use

Land Use Type	Value	Unit
Housing   Multi-Family	109	DU

☐ Click here to add a single custom land use type (will be included in the above list)

## Project Screening Summary

Existing Land Use	Proposed
13 Daily Vehicle Trips	445 Daily Vehicle Trips
82 Daily VMT	2,792 Daily VMT
<b>Tier 1 Screening Criteria</b>	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. <input type="checkbox"/>	
<b>Tier 2 Screening Criteria</b>	
The net increase in daily trips < 250 trips	432 Net Daily Trips
The net increase in daily VMT ≤ 0	2,710 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf
<b>The proposed project is required to perform VMT analysis.</b>	

Table 3-3  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
1	Proposed	950 S. Berendo Street	Apartments	77 DU	[1]	333	6	17	23	16	11	27
2	Proposed	3216 W. 8th Street	Hotel	80 Rooms	[3]	639	21	16	37	24	23	47
			Condominiums	8 DU	[4]	54	1	2	3	3	1	4
			Retail	7,273 GLSF	[5]	396	10	7	17	24	24	48
3	Proposed	958 S. Menlo Avenue	Hotel	96 Rooms	[1]	498	24	14	38	25	24	49
4	Proposed	3160 W. Geneva Street	Medical Office	141,164 GSF	[1]	3,320	195	57	252	127	319	446
			Senior Housing	40 DU								
5	Proposed	550 S. Shatto Place	Apartments	367 DU	[1]	2,446	10	136	146	170	70	240
			Office	11,965 GSF								
			Restaurant	24,435 GSF								
6	Proposed	1700 W. Olympic Boulevard	Charter Middle School	450 Students	[1]	941	186	119	305	28	36	64
7	Proposed	1025 S. Mariposa Avenue	Apartments	100 DU	[1]	392	7	19	26	19	11	30
8	Proposed	2859 Francis Avenue	Apartments	110 DU	[1]	508	10	30	40	29	19	48
9	Proposed	1612 W. Pico Boulevard	Charter (K-4) School	1,000 Students	[1]	2,182	434	280	714	65	82	147
10	Proposed	1224 S. Menlo Avenue	Affordable Housing	131 DU	[1]	349	18	38	56	24	13	37
11	Proposed	2405 W. 8th Street	Apartments	264 DU	[1]	950	23	64	87	68	43	111
			Retail	5,982 GLSF								
12	Proposed	2870 W. Olympic Boulevard	Apartments	126 DU	[1]	825	8	44	52	47	22	69
			Retail	6,000 GLSF								
13	Proposed	905 S. Beacon Avenue	Apartments	145 DU	[1]	589	20	40	60	42	27	69
			Retail	2,400 GLSF								
14	Proposed	825 S. Coronado Street	Apartments	77 DU	[1]	508	7	24	31	24	15	39
15	Proposed	3440 W. Wilshire Boulevard	Apartments	640 DU	[1]	2,348	30	123	153	137	65	202
			Retail	5,538 GLSF								
			High-Turnover Restaurant	4,600 GSF								
			Fast Casual Restaurant	2,000 GSF								
16	Proposed	619 Westlake Avenue	Apartments	78 DU	[1]	233	11	16	27	11	9	20
17	Proposed	1124 S. Normandie Avenue	Apartments	84 DU	[1]	526	10	25	35	26	15	41
18	Proposed	525 S. Virgil Avenue	Apartments	113 DU	[1]	604	(5)	37	32	34	6	40
			Affordable Housing	19 DU								
			Office	34,600 GSF								

Table 3-3 (Continued)  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
19	Proposed	625 S. La Fayette Park Place	Bridge Housing	70 Beds	[1]	89	4	5	9	5	4	9
20	Proposed	2972 W. 7th Street	Apartments Retail High-Turnover Restaurant	228 DU 4,105 GLSF 3,738 GSF	[1]	1,631	32	61	93	77	53	130
21	Proposed	2501 W. 7th Street	Charter Middle School	450 Students	[1]	502	99	63	162	16	20	36
22	Proposed	689 S. Catalina Street	Apartments	61 DU	[1]	365	5	23	28	22	12	34
23	Proposed	840 S. Mariposa Avenue	Apartments	173 DU	[1]	978	15	60	75	61	31	92
24	Proposed	2005 W. James M. Wood Boulevard	Hotel	100 Rooms	[1]	545	24	18	42	20	18	38
25	Proposed	2250 W. Pico Boulevard	Hotel	125 Rooms	[1]	409	26	19	45	10	9	19
26	Proposed	329 S. Rampart Boulevard	Apartments Affordable Housing	53 DU 8 DU	[1]	279	6	17	23	17	9	26
27	Proposed	1030 S. Lake Street	Assisted Living Senior Housing	338 Beds 34 DU	[1]	939	39	23	62	49	48	97
28	Proposed	923 S. Kenmore Avenue	Apartments	68 DU	[1]	432	7	26	33	26	15	41
29	Proposed	1810 W. Venice Boulevard	Self-Storage	154,024 GSF	[1]	385	12	10	22	20	20	40
30	Proposed	1420 S. Bonnie Brae Street	Apartments	26 DU	[1]	193	3	12	15	12	6	18
31	Proposed	966 S. Dewey Avenue	Hotel	99 Rooms	[1]	677	28	15	43	24	24	48
32	Proposed	926 S. Kingsley Drive	Apartments	69 DU	[1]	408	6	25	31	25	13	38
33	Proposed	668 S. Coronado Street	Apartments Retail	122 DU 1,182 GLSF	[1]	947	14	48	62	56	34	90
34	Proposed	631 S. Vermont Avenue	Hotel Condominiums Office Retail	200 Rooms 250 DU 49,227 GSF 21,320 GLSF	[1]	2,599	95	95	190	115	120	235
35	Proposed	510 S. Vermont Avenue	Office Retail Senior Housing Community Center Apartments	2,166 Emp 17,500 GLSF 72 DU 13,200 GSF 246 DU	[1]	3,215	216	104	320	121	293	414
36	Proposed	3240 W. Wilshire Boulevard	Hotel Apartments Retail	162 Rooms 545 DU 5,222 GLSF	[1]	1,353	15	173	188	89	23	112

Table 3-3 (Continued)  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
37	Proposed	1930 W. Wilshire Boulevard	Apartments Theater Classroom Hotel	478 DU 850 Seats 50 Students 220 Rooms	[1]	1,355	(44)	128	84	103	(41)	62
38	Proposed	2501 W. Olympic Boulevard	Apartments Retail	173 DU 36,180 GLSF	[1]	1,911	27	72	99	100	73	173
39	Proposed	605 S. Vermont Avenue	Apartments Museum	103 DU 30,937 GSF	[1]	755	17	39	56	42	37	79
40	Proposed	1322 W. Linwood Avenue	Apartments	84 DU	[1]	449	5	30	35	28	14	42
41	Proposed	1017 S. Mariposa Avenue	Apartments	79 DU	[1]	373	5	23	28	23	12	35
42	Proposed	616 S. Westmoreland Avenue	Apartments Restaurant Retail	77 DU 2,360 GSF 745 GLSF	[1]	446	1	30	31	31	5	36
43	Proposed	2649 W. San Marino Avenue	Apartments	45 DU	[1]	246	4	15	19	15	8	23
44	Proposed	2965 W. 6th Street	Hotel Restaurant	99 Rooms 545 GSF	[1]	688	26	18	44	25	25	50
45	Proposed	1011 S. Park View Street	Apartments	108 DU	[1]	594	9	38	47	38	19	57
46	Proposed	1728 W. 7th Street	Restaurant Bar	9,600 GSF 3,500 GSF	[1]	362	(30)	(40)	(70)	50	14	64
47	Under Construction	2850 W. 7th Street	Condominiums Hotel Retail	160 DU 40 Rooms 3,600 GLSF	[1]	1,057	20	72	92	72	42	114
48	Under Construction	820 S. Hoover Street	Condominiums Retail	32 DU 4,500 GLSF	[1]	414	75	15	90	18	14	32
49	Proposed	805 S. Catalina Street	Condominiums Retail	300 DU 5,000 GLSF	[1]	1,935	24	119	143	110	57	167
<b>TOTAL</b>						45,172	1,811	2,464	4,275	2,363	1,866	4,229

[1] Source: City of Los Angeles Department of Transportation (LADOT) and Department of City Planning (LADCP), except as noted below. The peak hour traffic volumes were forecast on trip data provided by LADOT and by applying trip rates as provided in the ITE "Trip Generation", 11th Edition, 2021. For those related projects that LADOT provided trip data, the peak hour directional distribution data provided in the ITE "Trip Generation" manual were utilized.

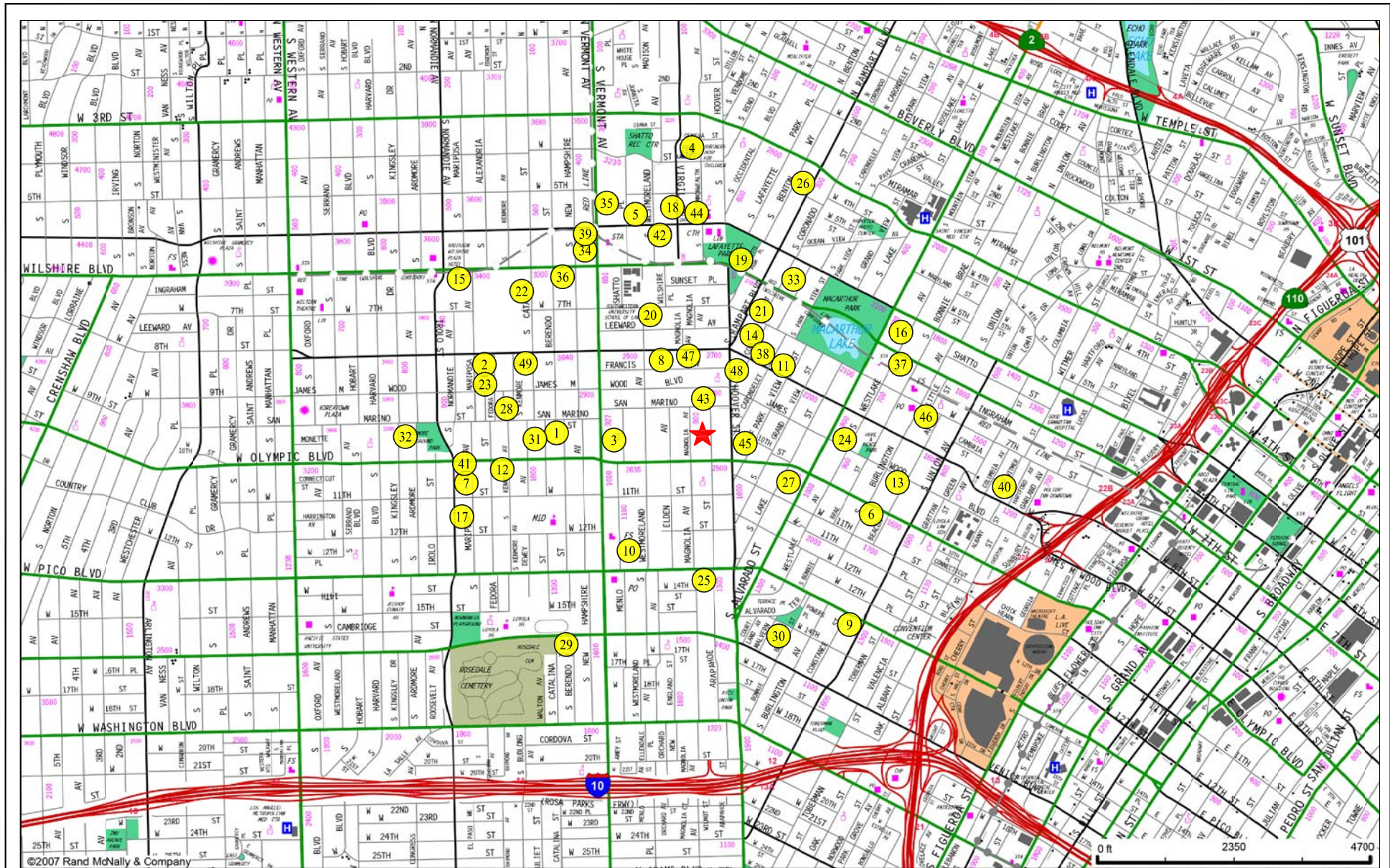
[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 310 (Hotel) trip generation average rates.

[4] ITE Land Use Code 220 (Multifamily Housing [Low-Rise] Not Close to Rail Transit) trip generation average rates.

[5] ITE Land Use Code 822 (Strip Retail Plaza [<40k]) trip generation average rates.





MAP SOURCE: RAND MCNALLY & COMPANY

Figure 3-8  
Location of Related Projects



c:\job\_file\4472\dwg\13-6.dwg 04/11/2022 08:36:12 rodriguez -----

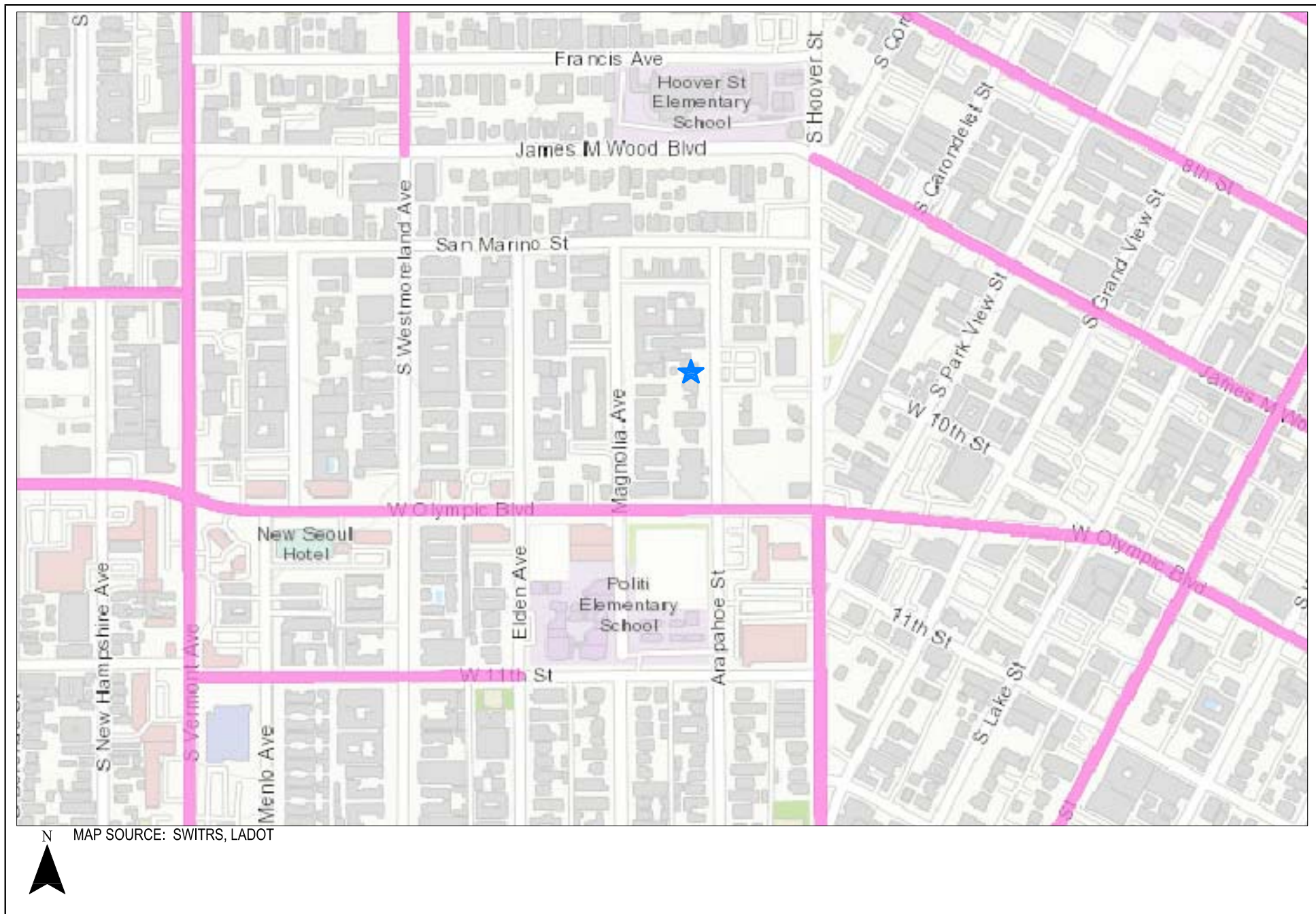


Figure 3-6  
City of Los Angeles High Injury Network



## **APPENDIX B**

### **COUNT DATA**

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : EldenAve\_OlympicBlvd  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 1

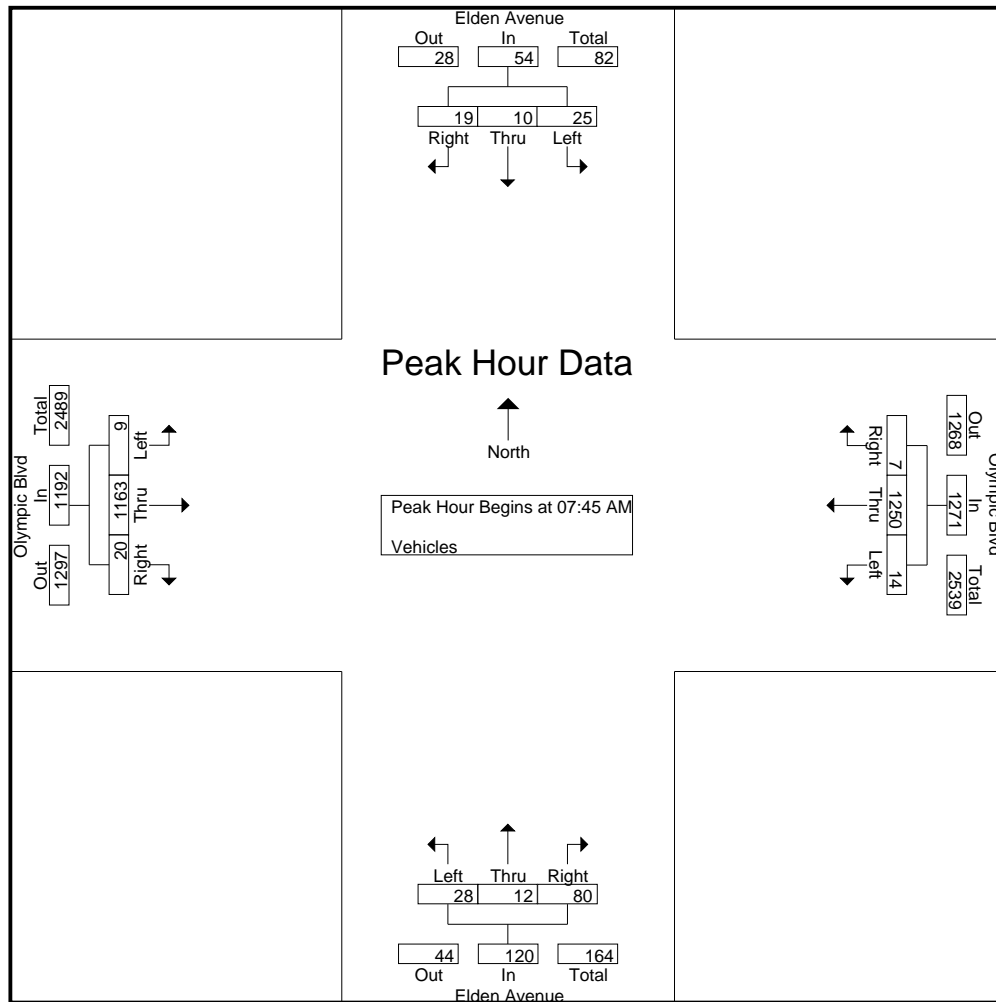
**Groups Printed- Vehicles**

	<b>Elden Avenue Southbound</b>			<b>Olympic Blvd Westbound</b>			<b>Elden Avenue Northbound</b>			<b>Olympic Blvd Eastbound</b>			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	7	3	2	0	236	7	5	2	6	6	128	4	406
07:15 AM	5	2	7	2	276	5	6	3	10	2	185	2	505
07:30 AM	9	3	2	6	279	9	11	0	19	5	241	6	590
07:45 AM	10	4	5	2	350	2	7	7	28	2	288	7	712
Total	31	12	16	10	1141	23	29	12	63	15	842	19	2213
08:00 AM	5	1	0	3	339	4	15	3	22	4	314	6	716
08:15 AM	7	5	11	4	264	0	3	2	16	2	279	2	595
08:30 AM	3	0	3	5	297	1	3	0	14	1	282	5	614
08:45 AM	4	2	1	3	347	2	3	1	14	5	295	2	679
Total	19	8	15	15	1247	7	24	6	66	12	1170	15	2604
09:00 AM	6	3	2	4	263	3	9	1	10	6	212	5	524
09:15 AM	3	1	2	2	262	6	3	0	9	2	188	8	486
09:30 AM	2	0	2	4	228	1	2	0	8	1	196	2	446
09:45 AM	4	0	0	3	279	5	5	1	12	0	163	2	474
Total	15	4	6	13	1032	15	19	2	39	9	759	17	1930
03:00 PM	3	3	2	9	233	11	10	2	11	5	302	3	594
03:15 PM	2	6	3	10	221	8	5	4	23	4	349	9	644
03:30 PM	4	3	0	7	211	2	3	3	14	2	329	6	584
03:45 PM	2	6	4	10	227	4	10	2	6	4	375	2	652
Total	11	18	9	36	892	25	28	11	54	15	1355	20	2474
04:00 PM	11	8	4	21	208	3	4	7	14	6	370	5	661
04:15 PM	2	3	5	7	255	7	6	6	13	3	356	6	669
04:30 PM	2	7	9	15	237	8	5	9	19	0	340	12	663
04:45 PM	2	2	3	11	242	6	6	2	9	4	353	2	642
Total	17	20	21	54	942	24	21	24	55	13	1419	25	2635
05:00 PM	4	6	3	19	245	13	11	3	13	6	380	4	707
05:15 PM	6	4	8	5	259	9	14	1	14	3	333	14	670
05:30 PM	6	2	3	11	246	7	11	14	16	3	340	4	663
05:45 PM	5	5	0	14	279	8	7	9	14	3	406	4	754
Total	21	17	14	49	1029	37	43	27	57	15	1459	26	2794
Grand Total	114	79	81	177	6283	131	164	82	334	79	7004	122	14650
Apprch %	41.6	28.8	29.6	2.7	95.3	2	28.3	14.1	57.6	1.1	97.2	1.7	
Total %	0.8	0.5	0.6	1.2	42.9	0.9	1.1	0.6	2.3	0.5	47.8	0.8	

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : EldenAve\_OlympicBlvd  
 Site Code : 00000000  
 Start Date : 4/28/2022  
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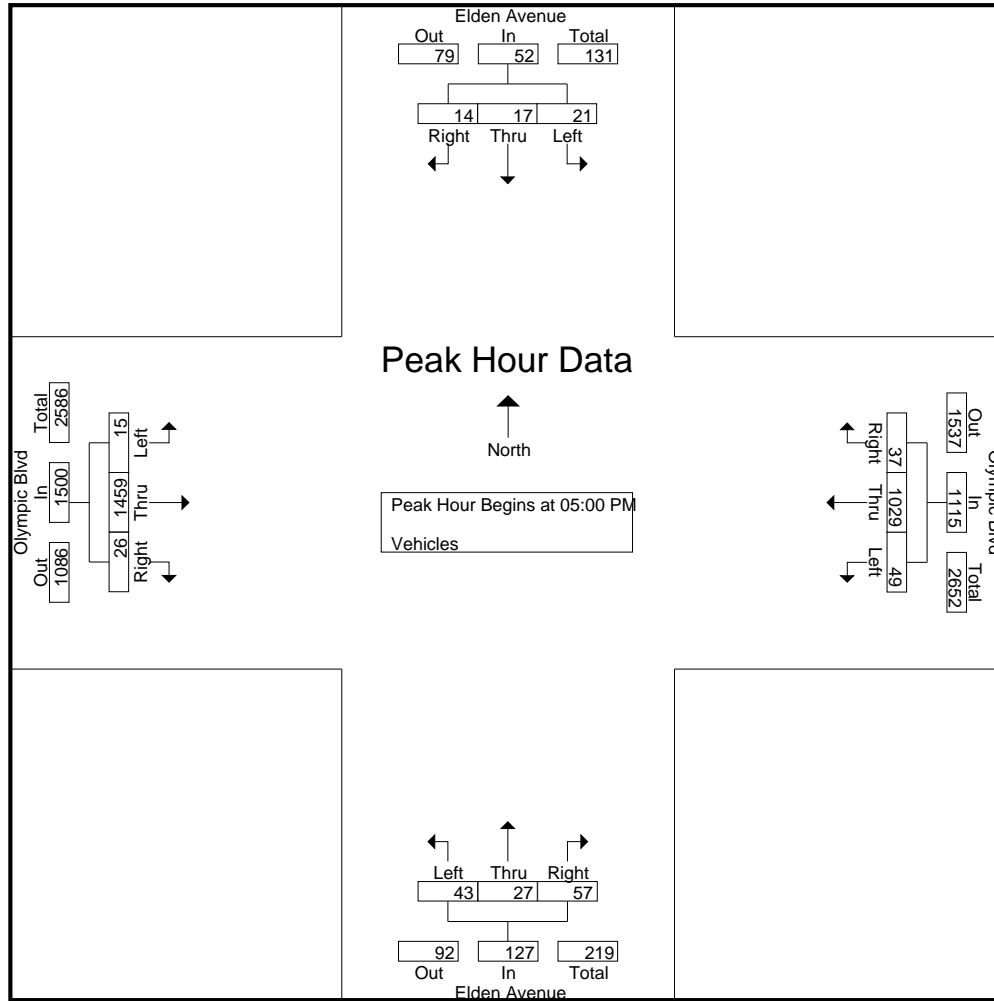
	Elden Avenue Southbound				Olympic Blvd Westbound				Elden Avenue Northbound				Olympic Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	10	4	5	19	2	350	2	354	7	7	28	42	2	288	7	297	712
08:00 AM	5	1	0	6	3	339	4	346	15	3	22	40	4	314	6	324	716
08:15 AM	7	5	11	23	4	264	0	268	3	2	16	21	2	279	2	283	595
08:30 AM	3	0	3	6	5	297	1	303	3	0	14	17	1	282	5	288	614
Total Volume	25	10	19	54	14	1250	7	1271	28	12	80	120	9	1163	20	1192	2637
% App. Total	46.3	18.5	35.2		1.1	98.3	0.6		23.3	10	66.7		0.8	97.6	1.7		
PHF	.625	.500	.432	.587	.700	.893	.438	.898	.467	.429	.714	.714	.563	.926	.714	.920	.921



**CITY TRAFFIC COUNTERS**  
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File Name : EldenAve\_OlympicBlvd  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 3

	Elden Avenue Southbound				Olympic Blvd Westbound				Elden Avenue Northbound				Olympic Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	6	3	13	19	245	13	277	11	3	13	27	6	380	4	390	707
05:15 PM	6	4	8	18	5	259	9	273	14	1	14	29	3	333	14	350	670
05:30 PM	6	2	3	11	11	246	7	264	11	14	16	41	3	340	4	347	663
05:45 PM	5	5	0	10	14	279	8	301	7	9	14	30	3	406	4	413	754
Total Volume	21	17	14	52	49	1029	37	1115	43	27	57	127	15	1459	26	1500	2794
% App. Total	40.4	32.7	26.9		4.4	92.3	3.3		33.9	21.3	44.9		1	97.3	1.7		
PHF	.875	.708	.438	.722	.645	.922	.712	.926	.768	.482	.891	.774	.625	.898	.464	.908	.926



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : EldenAve\_OlympicBlvd\_BP  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 1

**Groups Printed- Pedestrians and Bikes**

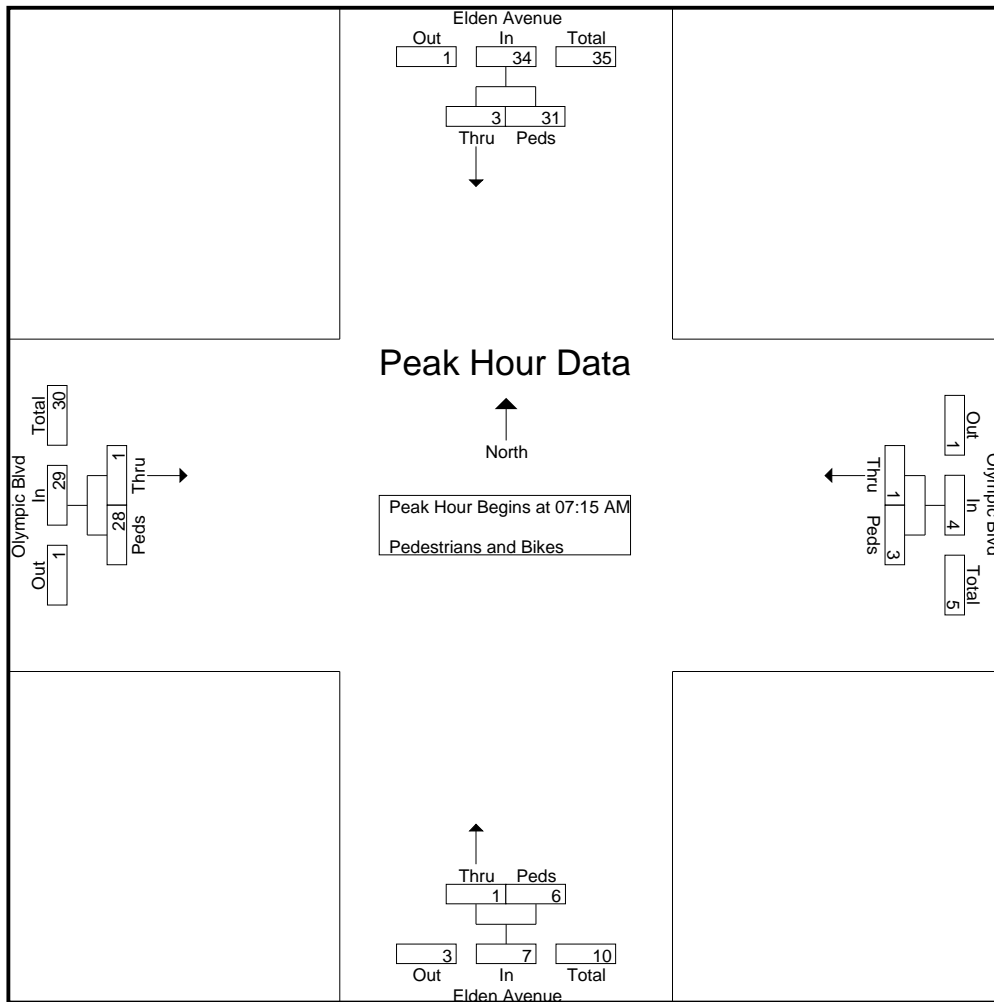
Start Time	Elden Avenue Southbound		Olympic Blvd Westbound		Elden Avenue Northbound		Olympic Blvd Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	1	6	0	0	0	0	0	0	7
07:15 AM	2	9	0	1	0	1	0	3	16
07:30 AM	0	11	1	0	0	2	1	7	22
07:45 AM	1	6	0	2	1	2	0	9	21
Total	4	32	1	3	1	5	1	19	66
08:00 AM	0	5	0	0	0	1	0	9	15
08:15 AM	0	1	0	0	0	1	1	2	5
08:30 AM	0	2	0	0	0	0	0	1	3
08:45 AM	1	7	1	0	2	0	0	7	18
Total	1	15	1	0	2	2	1	19	41
09:00 AM	0	2	0	0	1	1	0	1	5
09:15 AM	1	1	0	0	2	1	0	0	5
09:30 AM	0	1	0	0	0	1	0	2	4
09:45 AM	0	2	0	0	0	2	0	1	5
Total	1	6	0	0	3	5	0	4	19
03:00 PM	1	1	0	1	0	0	0	3	6
03:15 PM	0	8	1	5	2	8	0	4	28
03:30 PM	0	6	0	4	0	6	0	9	25
03:45 PM	2	6	0	12	1	4	0	11	36
Total	3	21	1	22	3	18	0	27	95
04:00 PM	0	12	0	6	2	9	0	6	35
04:15 PM	1	4	0	13	0	9	1	6	34
04:30 PM	0	20	0	7	0	5	0	12	44
04:45 PM	1	8	1	6	1	9	0	13	39
Total	2	44	1	32	3	32	1	37	152
05:00 PM	2	18	0	12	0	4	0	6	42
05:15 PM	0	1	0	16	1	0	0	8	26
05:30 PM	0	17	0	11	0	5	0	5	38
05:45 PM	1	6	0	8	0	4	0	8	27
Total	3	42	0	47	1	13	0	27	133
Grand Total	14	160	4	104	13	75	3	133	506
Apprch %	8	92	3.7	96.3	14.8	85.2	2.2	97.8	
Total %	2.8	31.6	0.8	20.6	2.6	14.8	0.6	26.3	

# CITY TRAFFIC COUNTERS

[WWW.CTCOUNTERS.COM](http://WWW.CTCOUNTERS.COM)

File Name : EldenAve\_OlympicBlvd\_BP  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 2

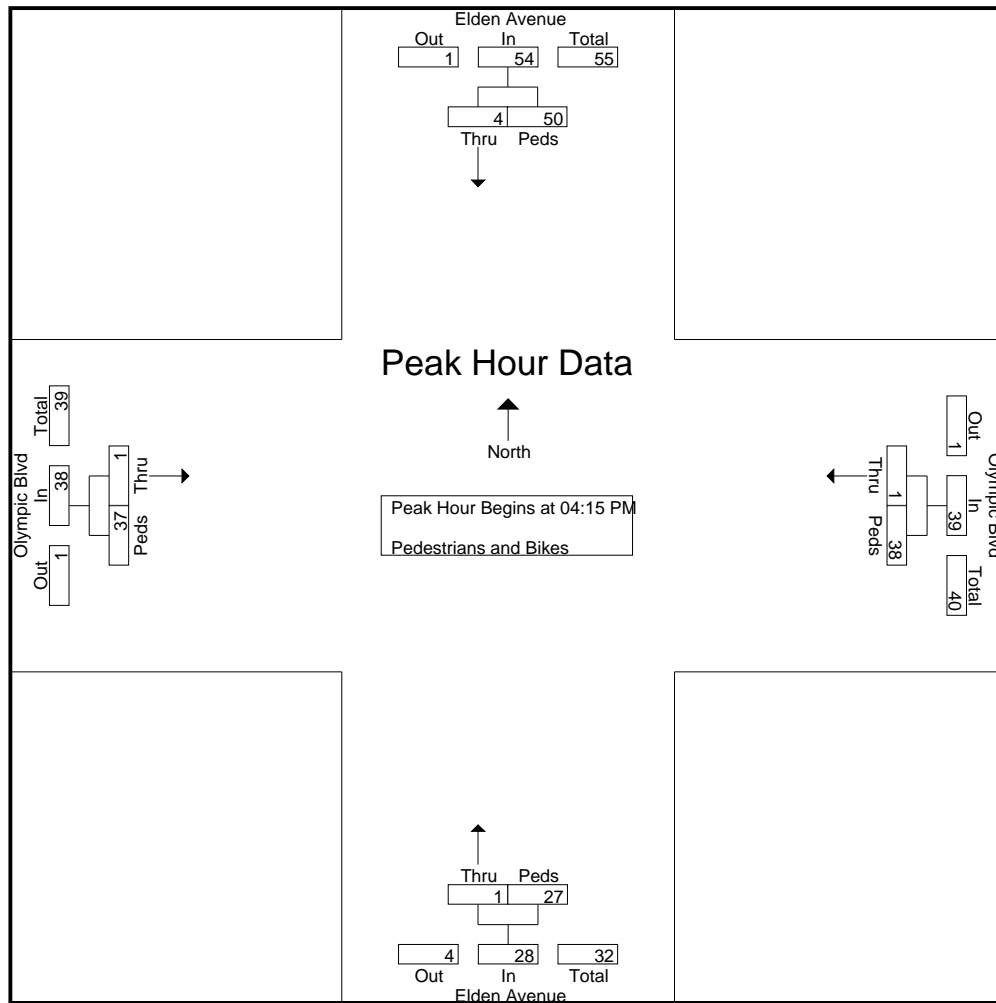
	Elden Avenue Southbound			Olympic Blvd Westbound			Elden Avenue Northbound			Olympic Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	2	9	11	0	1	1	0	1	1	0	3	3	16
07:30 AM	0	11	11	1	0	1	0	2	2	1	7	8	22
07:45 AM	1	6	7	0	2	2	1	2	3	0	9	9	21
08:00 AM	0	5	5	0	0	0	0	1	1	0	9	9	15
Total Volume	3	31	34	1	3	4	1	6	7	1	28	29	74
% App. Total	8.8	91.2		25	75		14.3	85.7		3.4	96.6		
PHF	.375	.705	.773	.250	.375	.500	.250	.750	.583	.250	.778	.806	.841



**CITY TRAFFIC COUNTERS**  
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File Name : EldenAve\_OlympicBlvd\_BP  
 Site Code : 00000000  
 Start Date : 4/28/2022  
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	Elden Avenue Southbound			Olympic Blvd Westbound			Elden Avenue Northbound			Olympic Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	1	4	5	0	13	13	0	9	9	1	6	7	34
04:30 PM	0	20	20	0	7	7	0	5	5	0	12	12	44
04:45 PM	1	8	9	1	6	7	1	9	10	0	13	13	39
05:00 PM	2	18	20	0	12	12	0	4	4	0	6	6	42
Total Volume	4	50	54	1	38	39	1	27	28	1	37	38	159
% App. Total	7.4	92.6		2.6	97.4		3.6	96.4		2.6	97.4		
PHF	.500	.625	.675	.250	.731	.750	.250	.750	.700	.250	.712	.731	.903



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : ArapahoeSt\_SanMarinoSt  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 1

**Groups Printed- Vehicles**

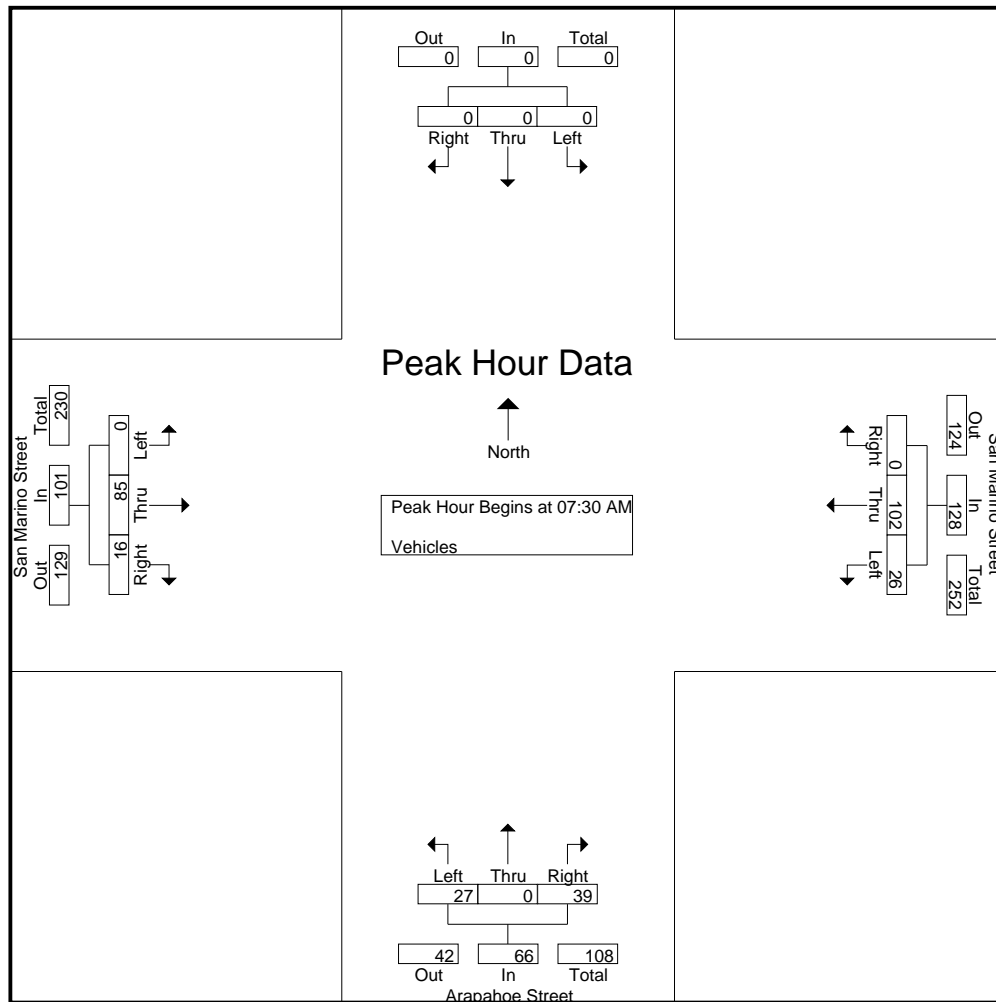
	Southbound			San Marino Street Westbound			Arapahoe Street Northbound			San Marino Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	3	8	0	6	0	10	0	11	2	40
07:15 AM	0	0	0	3	9	0	3	0	8	0	14	4	41
07:30 AM	0	0	0	3	15	0	8	0	15	0	26	4	71
07:45 AM	0	0	0	7	29	0	6	0	8	0	38	5	93
Total	0	0	0	16	61	0	23	0	41	0	89	15	245
08:00 AM	0	0	0	11	33	0	7	0	10	0	14	5	80
08:15 AM	0	0	0	5	25	0	6	0	6	0	7	2	51
08:30 AM	0	0	0	3	11	0	4	0	8	0	15	1	42
08:45 AM	0	0	0	3	11	0	4	0	8	0	15	5	46
Total	0	0	0	22	80	0	21	0	32	0	51	13	219
09:00 AM	0	0	0	2	16	0	6	0	5	0	11	2	42
09:15 AM	0	0	0	4	13	0	5	0	2	0	15	4	43
09:30 AM	0	0	0	5	8	0	1	0	11	0	11	7	43
09:45 AM	0	0	0	5	20	0	5	0	5	0	16	1	52
Total	0	0	0	16	57	0	17	0	23	0	53	14	180
03:00 PM	0	0	0	4	19	0	5	0	7	0	16	5	56
03:15 PM	0	0	0	6	21	0	2	0	7	0	18	5	59
03:30 PM	0	0	0	5	23	0	3	0	8	0	5	4	48
03:45 PM	0	0	0	10	27	0	6	0	6	0	18	9	76
Total	0	0	0	25	90	0	16	0	28	0	57	23	239
04:00 PM	0	0	0	8	23	0	2	0	3	0	21	6	63
04:15 PM	0	0	0	4	21	0	6	0	7	0	16	11	65
04:30 PM	0	0	0	3	20	0	9	0	9	0	15	7	63
04:45 PM	0	0	0	11	19	0	4	0	9	0	19	6	68
Total	0	0	0	26	83	0	21	0	28	0	71	30	259
05:00 PM	0	0	0	6	22	0	5	0	9	0	23	6	71
05:15 PM	0	0	0	7	21	0	3	0	7	0	9	4	51
05:30 PM	0	0	0	8	26	0	7	0	9	0	16	7	73
05:45 PM	0	0	0	7	19	0	5	0	6	0	16	9	62
Total	0	0	0	28	88	0	20	0	31	0	64	26	257
Grand Total	0	0	0	133	459	0	118	0	183	0	385	121	1399
Apprch %	0	0	0	22.5	77.5	0	39.2	0	60.8	0	76.1	23.9	
Total %	0	0	0	9.5	32.8	0	8.4	0	13.1	0	27.5	8.6	



**CITY TRAFFIC COUNTERS**  
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File Name : ArapahoeSt\_SanMarinoSt  
 Site Code : 00000000  
 Start Date : 4/28/2022  
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	Southbound				San Marino Street Westbound				Arapahoe Street Northbound				San Marino Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	3	15	0	18	8	0	15	23	0	26	4	30	71
07:45 AM	0	0	0	0	7	29	0	36	6	0	8	14	0	38	5	43	93
08:00 AM	0	0	0	0	11	33	0	44	7	0	10	17	0	14	5	19	80
08:15 AM	0	0	0	0	5	25	0	30	6	0	6	12	0	7	2	9	51
Total Volume	0	0	0	0	26	102	0	128	27	0	39	66	0	85	16	101	295
% App. Total	0	0	0	0	20.3	79.7	0		40.9	0	59.1		0	84.2	15.8		
PHF	.000	.000	.000	.000	.591	.773	.000	.727	.844	.000	.650	.717	.000	.559	.800	.587	.793

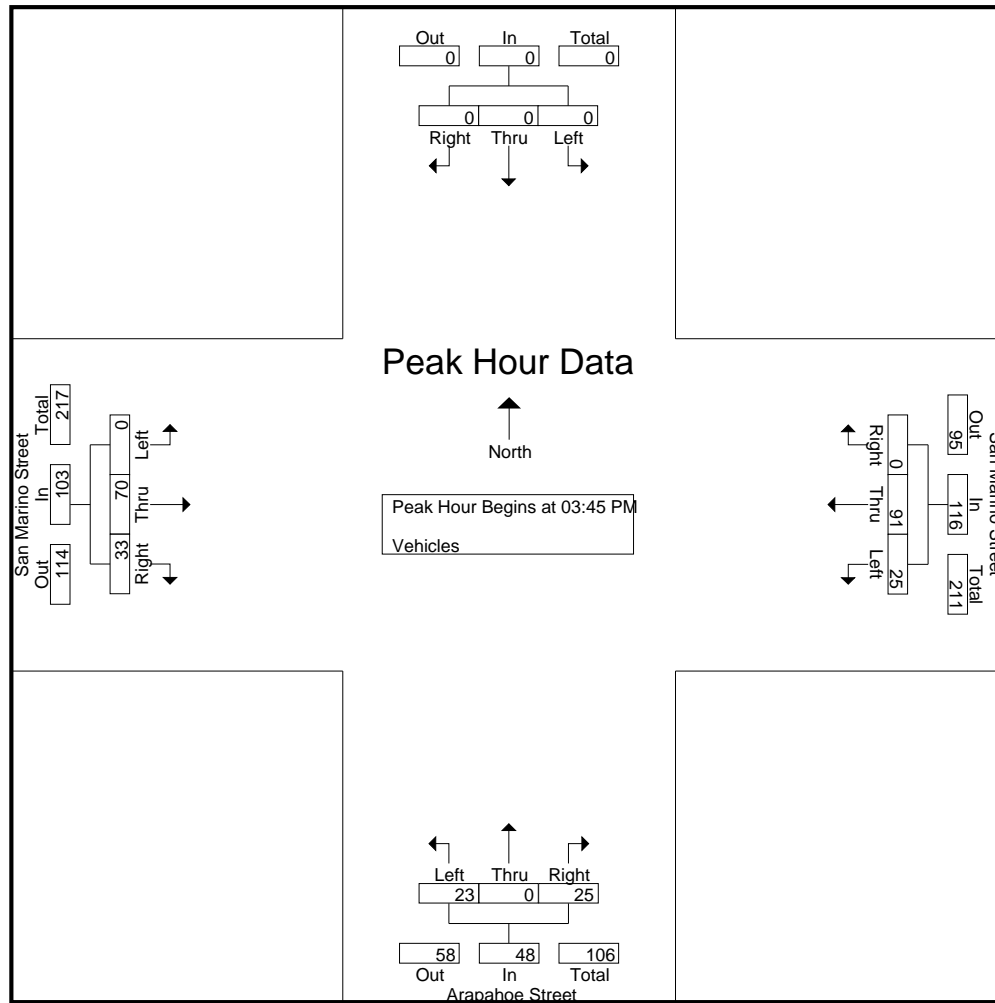


# CITY TRAFFIC COUNTERS

[WWW.CTCOUNTERS.COM](http://WWW.CTCOUNTERS.COM)

File Name : ArapahoeSt\_SanMarinoSt  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 3

	Southbound				San Marino Street Westbound				Arapahoe Street Northbound				San Marino Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	0	0	0	10	27	0	37	6	0	6	12	0	18	9	27	76
04:00 PM	0	0	0	0	8	23	0	31	2	0	3	5	0	21	6	27	63
04:15 PM	0	0	0	0	4	21	0	25	6	0	7	13	0	16	11	27	65
04:30 PM	0	0	0	0	3	20	0	23	9	0	9	18	0	15	7	22	63
Total Volume	0	0	0	0	25	91	0	116	23	0	25	48	0	70	33	103	267
% App. Total	0	0	0	0	21.6	78.4	0		47.9	0	52.1		0	68	32		
PHF	.000	.000	.000	.000	.625	.843	.000	.784	.639	.000	.694	.667	.000	.833	.750	.954	.878



**CITY TRAFFIC COUNTERS**  
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File Name : ArapahoeSt\_SanMarinoSt\_BP  
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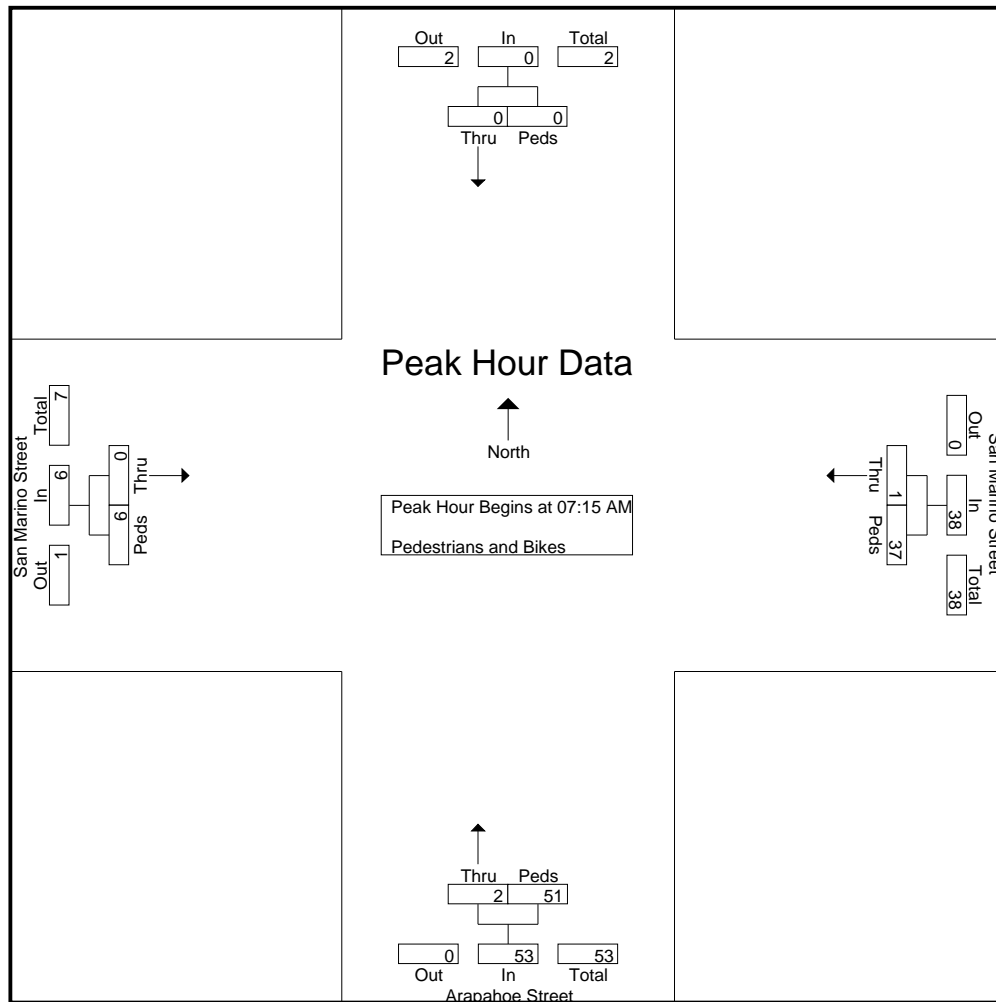
**Groups Printed- Pedestrians and Bikes**

Start Time	Southbound		San Marino Street Westbound		Arapahoe Street Northbound		San Marino Street Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	0	0	0	0	0	1	0	0	1
07:15 AM	0	0	0	2	0	8	0	0	10
07:30 AM	0	0	0	10	0	9	0	4	23
07:45 AM	0	0	1	21	0	25	0	2	49
Total	0	0	1	33	0	43	0	6	83
08:00 AM	0	0	0	4	2	9	0	0	15
08:15 AM	0	0	0	2	0	5	0	0	7
08:30 AM	0	0	0	2	2	3	0	0	7
08:45 AM	0	0	0	1	0	3	0	0	4
Total	0	0	0	9	4	20	0	0	33
09:00 AM	0	0	0	0	0	2	0	0	2
09:15 AM	0	0	0	0	0	1	0	0	1
09:45 AM	0	0	0	1	0	4	0	0	5
Total	0	0	0	1	0	7	0	0	8
03:00 PM	0	0	0	3	0	5	0	0	8
03:15 PM	0	0	0	0	1	6	0	0	7
03:30 PM	0	0	0	0	1	5	0	0	6
03:45 PM	0	0	0	5	0	11	0	0	16
Total	0	0	0	8	2	27	0	0	37
04:00 PM	0	0	0	1	0	6	0	1	8
04:15 PM	0	0	0	2	0	5	0	0	7
04:30 PM	0	0	0	3	0	4	0	2	9
04:45 PM	0	0	0	0	0	4	0	1	5
Total	0	0	0	6	0	19	0	4	29
05:00 PM	0	0	1	0	0	6	0	1	8
05:15 PM	0	0	0	1	0	8	0	1	10
05:30 PM	0	0	0	1	0	7	0	0	8
05:45 PM	0	0	0	2	0	2	0	1	5
Total	0	0	1	4	0	23	0	3	31
Grand Total	0	0	2	61	6	139	0	13	221
Apprch %	0	0	3.2	96.8	4.1	95.9	0	100	
Total %	0	0	0.9	27.6	2.7	62.9	0	5.9	

**CITY TRAFFIC COUNTERS**  
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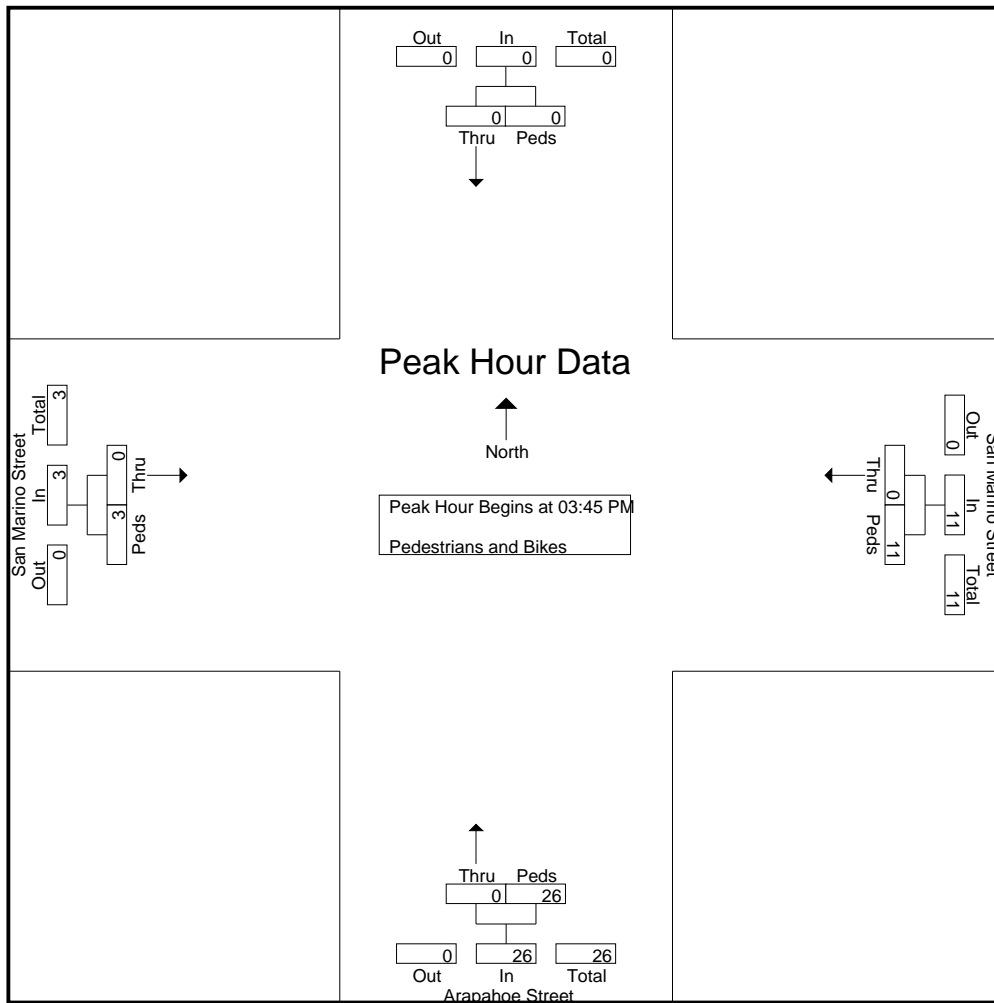
	Southbound			San Marino Street Westbound			Arapahoe Street Northbound			San Marino Street Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	0	0	0	2	2	0	8	8	0	0	0	10
07:30 AM	0	0	0	0	10	10	0	9	9	0	4	4	23
07:45 AM	0	0	0	1	21	22	0	25	25	0	2	2	49
08:00 AM	0	0	0	0	4	4	2	9	11	0	0	0	15
Total Volume	0	0	0	1	37	38	2	51	53	0	6	6	97
% App. Total	0	0		2.6	97.4		3.8	96.2		0	100		
PHF	.000	.000	.000	.250	.440	.432	.250	.510	.530	.000	.375	.375	.495



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	Southbound			San Marino Street Westbound			Arapahoe Street Northbound			San Marino Street Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:45 PM													
03:45 PM	0	0	0	0	5	5	0	11	11	0	0	0	16
04:00 PM	0	0	0	0	1	1	0	6	6	0	1	1	8
04:15 PM	0	0	0	0	2	2	0	5	5	0	0	0	7
04:30 PM	0	0	0	0	3	3	0	4	4	0	2	2	9
Total Volume	0	0	0	0	11	11	0	26	26	0	3	3	40
% App. Total	0	0		0	100		0	100		0	100		
PHF	.000	.000	.000	.000	.550	.550	.000	.591	.591	.000	.375	.375	.625



**CITY TRAFFIC COUNTERS**  
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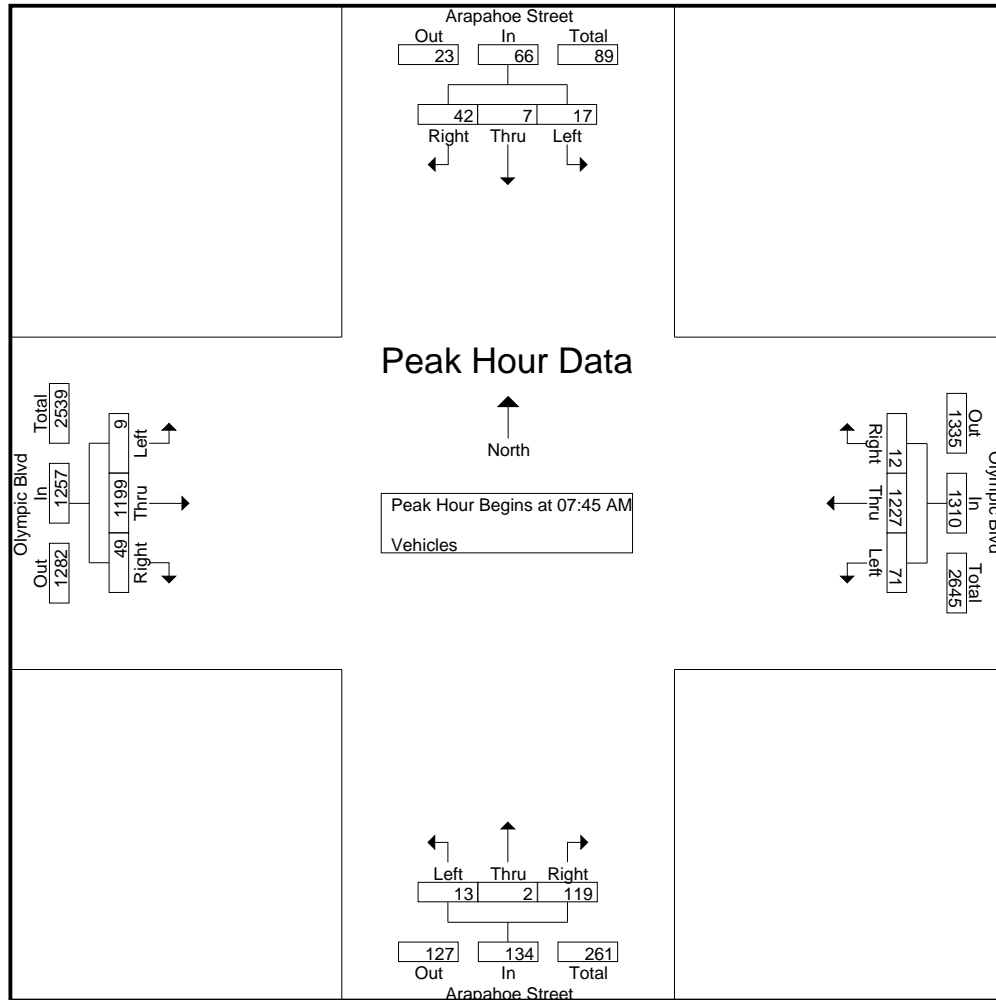
**Groups Printed- Vehicles**

	Arapahoe Street Southbound			Olympic Blvd Westbound			Arapahoe Street Northbound			Olympic Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	0	6	8	244	8	1	0	22	3	131	10	434
07:15 AM	4	0	7	10	275	2	2	0	21	2	202	7	532
07:30 AM	5	0	4	24	281	6	5	0	30	4	264	9	632
07:45 AM	3	2	13	25	333	3	2	1	34	0	283	28	727
Total	13	2	30	67	1133	19	10	1	107	9	880	54	2325
08:00 AM	7	2	14	18	321	1	3	0	28	3	320	7	724
08:15 AM	4	2	9	16	269	2	3	1	28	5	311	7	657
08:30 AM	3	1	6	12	304	6	5	0	29	1	285	7	659
08:45 AM	0	0	10	7	322	3	4	1	15	2	311	5	680
Total	14	5	39	53	1216	12	15	2	100	11	1227	26	2720
09:00 AM	5	0	7	12	256	5	7	0	26	3	208	10	539
09:15 AM	3	0	5	7	281	2	2	0	18	4	197	8	527
09:30 AM	1	0	5	5	250	1	1	0	15	2	204	12	496
09:45 AM	2	0	6	14	253	3	4	0	18	5	162	5	472
Total	11	0	23	38	1040	11	14	0	77	14	771	35	2034
03:00 PM	2	2	5	9	234	5	5	4	22	2	313	15	618
03:15 PM	0	1	2	14	247	8	2	0	16	5	372	7	674
03:30 PM	0	1	7	13	204	4	2	0	31	3	352	11	628
03:45 PM	2	1	2	11	245	4	5	0	24	7	357	13	671
Total	4	5	16	47	930	21	14	4	93	17	1394	46	2591
04:00 PM	0	0	6	12	231	3	3	1	20	4	388	15	683
04:15 PM	2	1	2	6	258	9	1	1	32	5	365	10	692
04:30 PM	2	0	7	12	264	3	1	0	31	6	330	16	672
04:45 PM	1	1	7	15	260	5	1	1	20	9	367	10	697
Total	5	2	22	45	1013	20	6	3	103	24	1450	51	2744
05:00 PM	1	1	6	9	255	7	1	2	30	6	401	15	734
05:15 PM	0	0	3	8	272	8	1	0	31	3	370	13	709
05:30 PM	2	0	11	13	260	5	6	1	28	4	351	13	694
05:45 PM	1	2	4	13	290	7	0	1	24	4	396	16	758
Total	4	3	24	43	1077	27	8	4	113	17	1518	57	2895
Grand Total	51	17	154	293	6409	110	67	14	593	92	7240	269	15309
Apprch %	23	7.7	69.4	4.3	94.1	1.6	9.9	2.1	88	1.2	95.3	3.5	
Total %	0.3	0.1	1	1.9	41.9	0.7	0.4	0.1	3.9	0.6	47.3	1.8	

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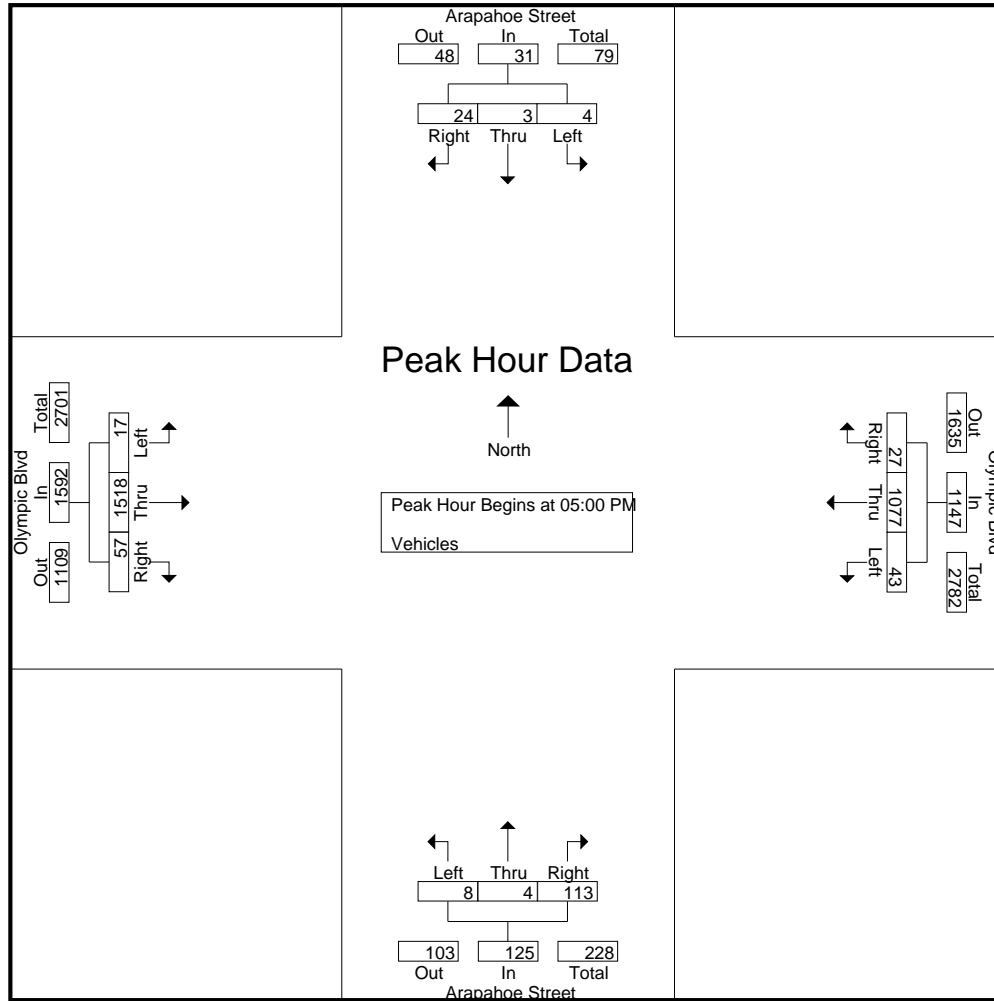
	Arapahoe Street Southbound				Olympic Blvd Westbound				Arapahoe Street Northbound				Olympic Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	3	2	13	18	25	333	3	361	2	1	34	37	0	283	28	311	727
08:00 AM	7	2	14	23	18	321	1	340	3	0	28	31	3	320	7	330	724
08:15 AM	4	2	9	15	16	269	2	287	3	1	28	32	5	311	7	323	657
08:30 AM	3	1	6	10	12	304	6	322	5	0	29	34	1	285	7	293	659
Total Volume	17	7	42	66	71	1227	12	1310	13	2	119	134	9	1199	49	1257	2767
% App. Total	25.8	10.6	63.6		5.4	93.7	0.9		9.7	1.5	88.8		0.7	95.4	3.9		
PHF	.607	.875	.750	.717	.710	.921	.500	.907	.650	.500	.875	.905	.450	.937	.438	.952	.952



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	Arapahoe Street Southbound				Olympic Blvd Westbound				Arapahoe Street Northbound				Olympic Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	1	6	8	9	255	7	271	1	2	30	33	6	401	15	422	734
05:15 PM	0	0	3	3	8	272	8	288	1	0	31	32	3	370	13	386	709
05:30 PM	2	0	11	13	13	260	5	278	6	1	28	35	4	351	13	368	694
05:45 PM	1	2	4	7	13	290	7	310	0	1	24	25	4	396	16	416	758
Total Volume	4	3	24	31	43	1077	27	1147	8	4	113	125	17	1518	57	1592	2895
% App. Total	12.9	9.7	77.4		3.7	93.9	2.4		6.4	3.2	90.4		1.1	95.4	3.6		
PHF	.500	.375	.545	.596	.827	.928	.844	.925	.333	.500	.911	.893	.708	.946	.891	.943	.955





**CITY TRAFFIC COUNTERS**  
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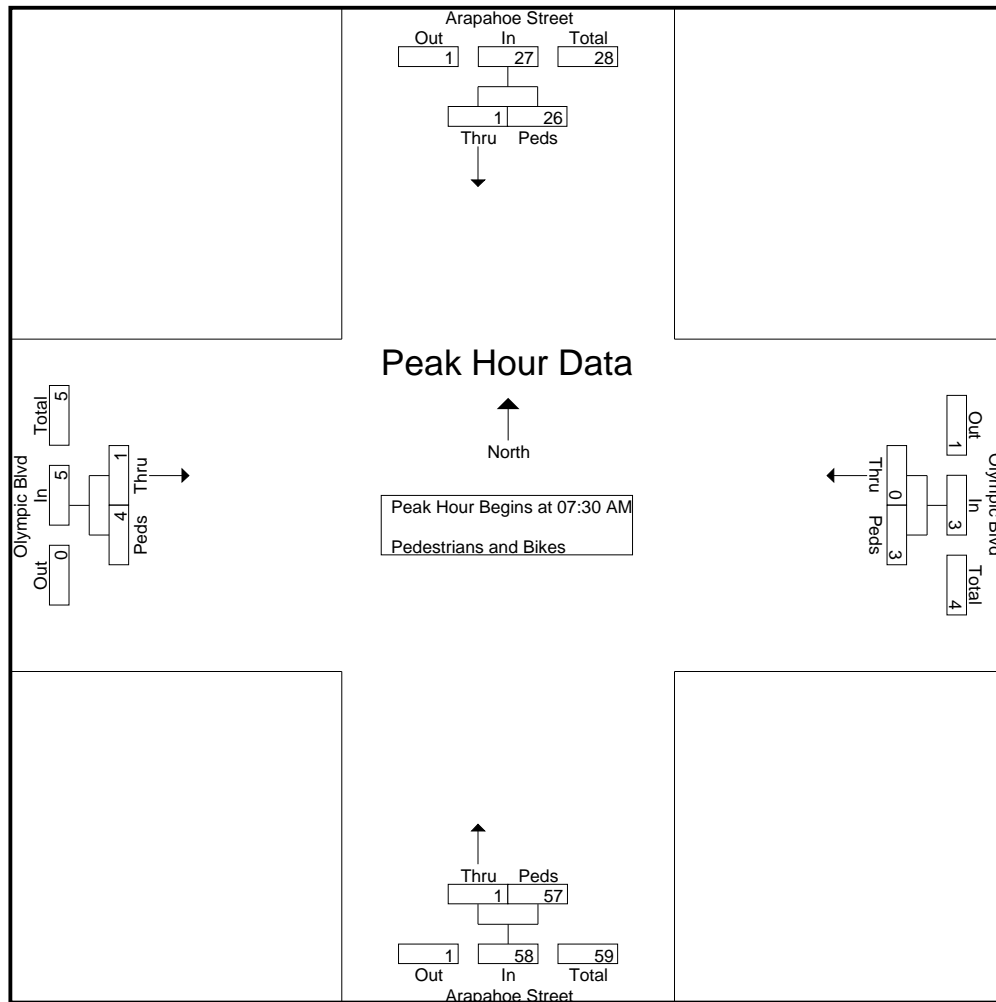
**Groups Printed- Pedestrians and Bikes**

Start Time	Arapahoe Street Southbound		Olympic Blvd Westbound		Arapahoe Street Northbound		Olympic Blvd Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	1	6	0	1	0	7	1	2	18
07:15 AM	2	5	0	0	0	4	0	1	12
07:30 AM	0	8	0	1	1	5	1	2	18
07:45 AM	0	8	0	0	0	25	0	1	34
Total	3	27	0	2	1	41	2	6	82
08:00 AM	1	6	0	1	0	17	0	0	25
08:15 AM	0	4	0	1	0	10	0	1	16
08:30 AM	0	6	0	2	0	8	0	1	17
08:45 AM	1	8	0	0	2	4	0	2	17
Total	2	24	0	4	2	39	0	4	75
09:00 AM	0	4	0	0	0	2	0	0	6
09:15 AM	1	12	0	1	2	6	0	0	22
09:30 AM	0	10	0	1	2	8	0	0	21
09:45 AM	0	9	0	2	0	10	0	1	22
Total	1	35	0	4	4	26	0	1	71
03:00 PM	1	3	0	2	0	7	0	0	13
03:15 PM	0	8	0	1	2	11	1	1	24
03:30 PM	0	17	0	0	0	8	0	0	25
03:45 PM	1	5	0	1	0	10	0	0	17
Total	2	33	0	4	2	36	1	1	79
04:00 PM	0	13	0	1	2	15	0	0	31
04:15 PM	1	13	0	4	0	14	0	0	32
04:30 PM	0	20	0	2	0	8	0	1	31
04:45 PM	0	4	0	1	0	6	0	3	14
Total	1	50	0	8	2	43	0	4	108
05:00 PM	2	20	0	0	0	10	0	0	32
05:15 PM	0	4	0	1	0	7	0	2	14
05:30 PM	0	4	0	0	0	7	0	0	11
05:45 PM	0	13	0	0	0	11	0	0	24
Total	2	41	0	1	0	35	0	2	81
Grand Total	11	210	0	23	11	220	3	18	496
Apprch %	5	95	0	100	4.8	95.2	14.3	85.7	
Total %	2.2	42.3	0	4.6	2.2	44.4	0.6	3.6	

**CITY TRAFFIC COUNTERS**  
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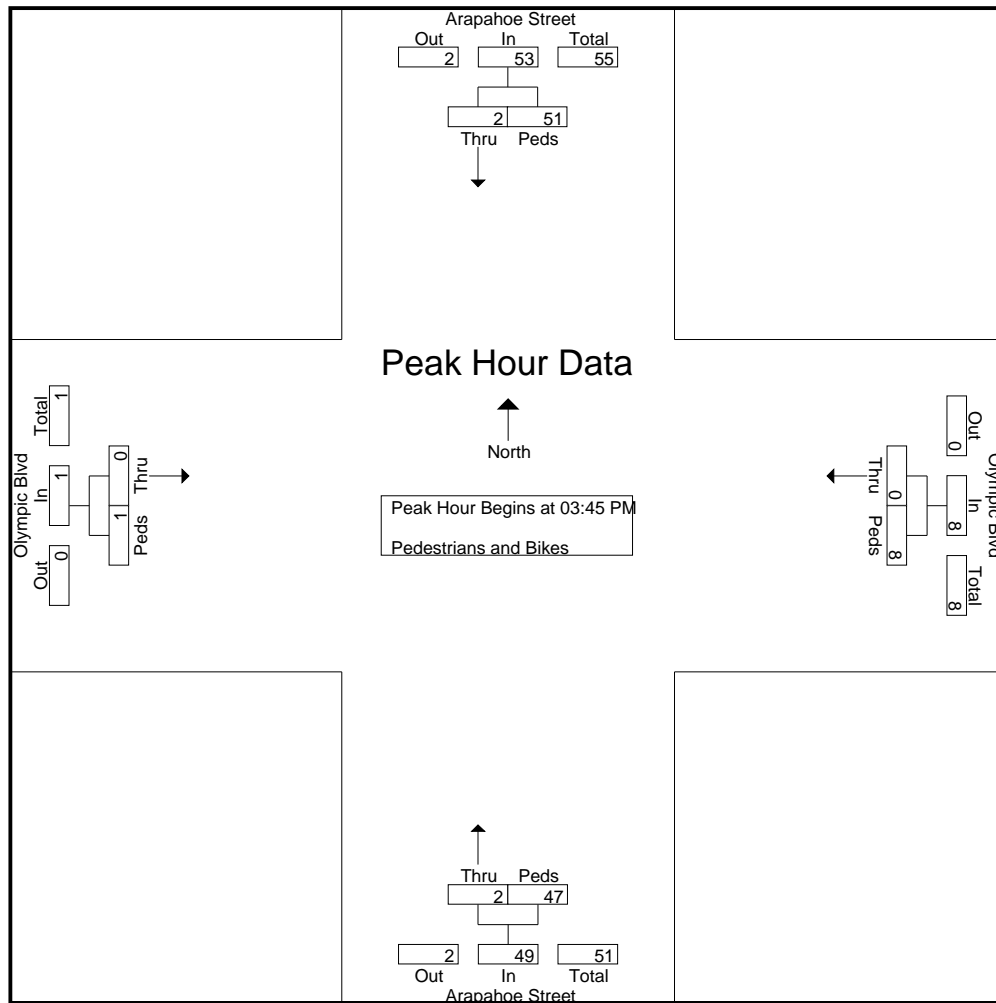
	Arapahoe Street Southbound			Olympic Blvd Westbound			Arapahoe Street Northbound			Olympic Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	8	8	0	1	1	1	5	6	1	2	3	18
07:45 AM	0	8	8	0	0	0	0	25	25	0	1	1	34
08:00 AM	1	6	7	0	1	1	0	17	17	0	0	0	25
08:15 AM	0	4	4	0	1	1	0	10	10	0	1	1	16
Total Volume	1	26	27	0	3	3	1	57	58	1	4	5	93
% App. Total	3.7	96.3		0	100		1.7	98.3		20	80		
PHF	.250	.813	.844	.000	.750	.750	.250	.570	.580	.250	.500	.417	.684



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	Arapahoe Street Southbound			Olympic Blvd Westbound			Arapahoe Street Northbound			Olympic Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:45 PM													
03:45 PM	1	5	6	0	1	1	0	10	10	0	0	0	17
04:00 PM	0	13	13	0	1	1	2	15	17	0	0	0	31
04:15 PM	1	13	14	0	4	4	0	14	14	0	0	0	32
04:30 PM	0	20	20	0	2	2	0	8	8	0	1	1	31
Total Volume	2	51	53	0	8	8	2	47	49	0	1	1	111
% App. Total	3.8	96.2		0	100		4.1	95.9		0	100		
PHF	.500	.638	.663	.000	.500	.500	.250	.783	.721	.000	.250	.250	.867



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**Groups Printed- Vehicles**

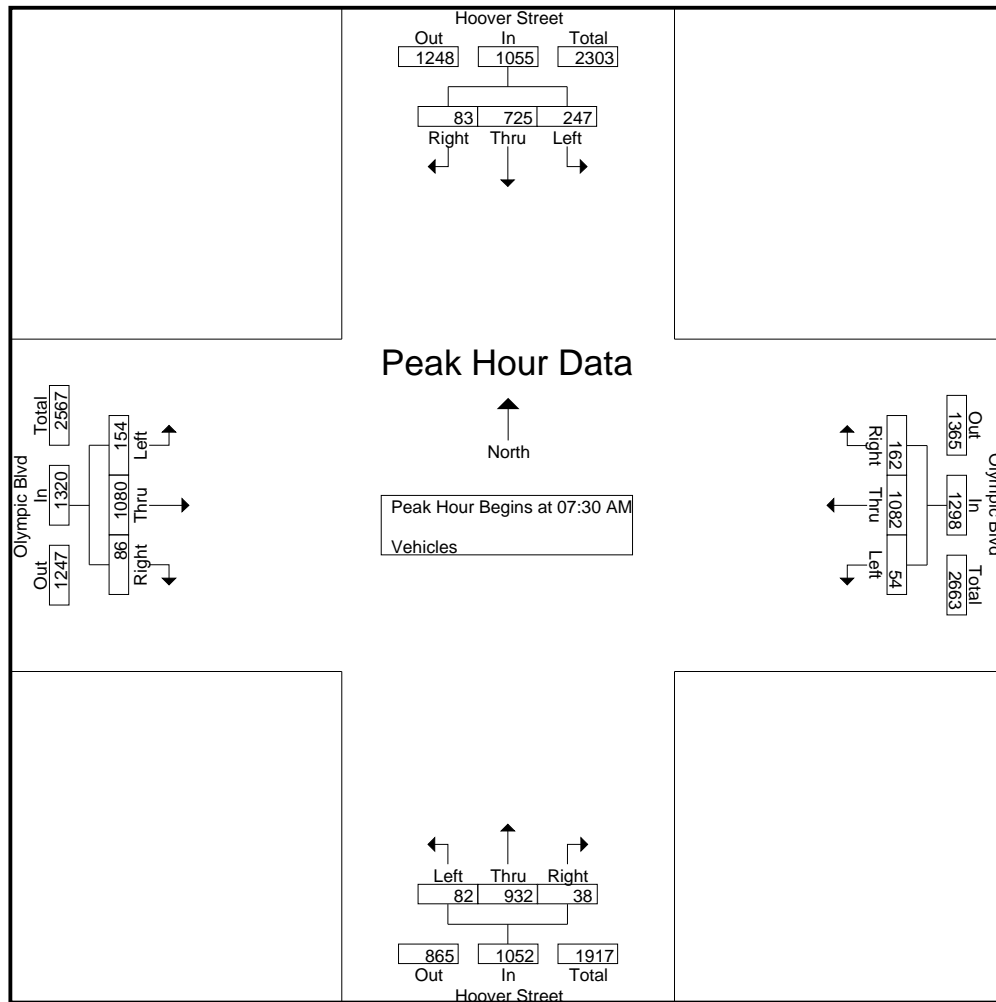
	Hoover Street Southbound			Olympic Blvd Westbound			Hoover Street Northbound			Olympic Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	33	115	12	3	221	36	22	207	9	20	120	15	813
07:15 AM	31	141	13	5	262	33	25	269	7	26	184	11	1007
07:30 AM	49	173	20	13	251	47	21	220	11	42	226	13	1086
07:45 AM	58	176	16	14	296	45	31	265	6	48	271	22	1248
Total	171	605	61	35	1030	161	99	961	33	136	801	61	4154
08:00 AM	78	196	20	13	289	35	23	226	7	29	302	25	1243
08:15 AM	62	180	27	14	246	35	7	221	14	35	281	26	1148
08:30 AM	34	133	20	10	272	37	27	192	15	33	263	16	1052
08:45 AM	44	132	26	8	263	41	28	226	8	30	274	27	1107
Total	218	641	93	45	1070	148	85	865	44	127	1120	94	4550
09:00 AM	26	104	14	15	226	38	19	189	7	24	191	16	869
09:15 AM	20	111	27	11	236	27	12	194	6	10	199	17	870
09:30 AM	34	120	29	15	230	29	15	143	12	18	191	15	851
09:45 AM	29	164	29	12	242	34	11	210	11	9	154	19	924
Total	109	499	99	53	934	128	57	736	36	61	735	67	3514
03:00 PM	65	255	27	19	195	43	22	184	18	30	268	28	1154
03:15 PM	50	177	22	11	184	40	27	175	13	34	333	21	1087
03:30 PM	77	220	13	13	210	49	25	207	14	34	324	21	1207
03:45 PM	62	175	20	15	223	46	29	186	9	32	317	25	1139
Total	254	827	82	58	812	178	103	752	54	130	1242	95	4587
04:00 PM	68	210	25	10	193	53	41	239	12	33	339	32	1255
04:15 PM	62	197	15	14	259	55	25	161	10	23	366	20	1207
04:30 PM	53	223	13	10	229	50	25	262	16	20	293	37	1231
04:45 PM	73	197	19	13	242	52	33	164	9	26	328	23	1179
Total	256	827	72	47	923	210	124	826	47	102	1326	112	4872
05:00 PM	62	232	17	20	212	49	37	228	14	40	357	22	1290
05:15 PM	62	188	13	18	249	66	40	203	8	36	335	15	1233
05:30 PM	69	180	25	16	239	54	14	177	10	29	310	17	1140
05:45 PM	51	164	21	7	280	74	22	229	12	27	369	17	1273
Total	244	764	76	61	980	243	113	837	44	132	1371	71	4936
Grand Total	1252	4163	483	299	5749	1068	581	4977	258	688	6595	500	26613
Apprch %	21.2	70.6	8.2	4.2	80.8	15	10	85.6	4.4	8.8	84.7	6.4	
Total %	4.7	15.6	1.8	1.1	21.6	4	2.2	18.7	1	2.6	24.8	1.9	

# CITY TRAFFIC COUNTERS

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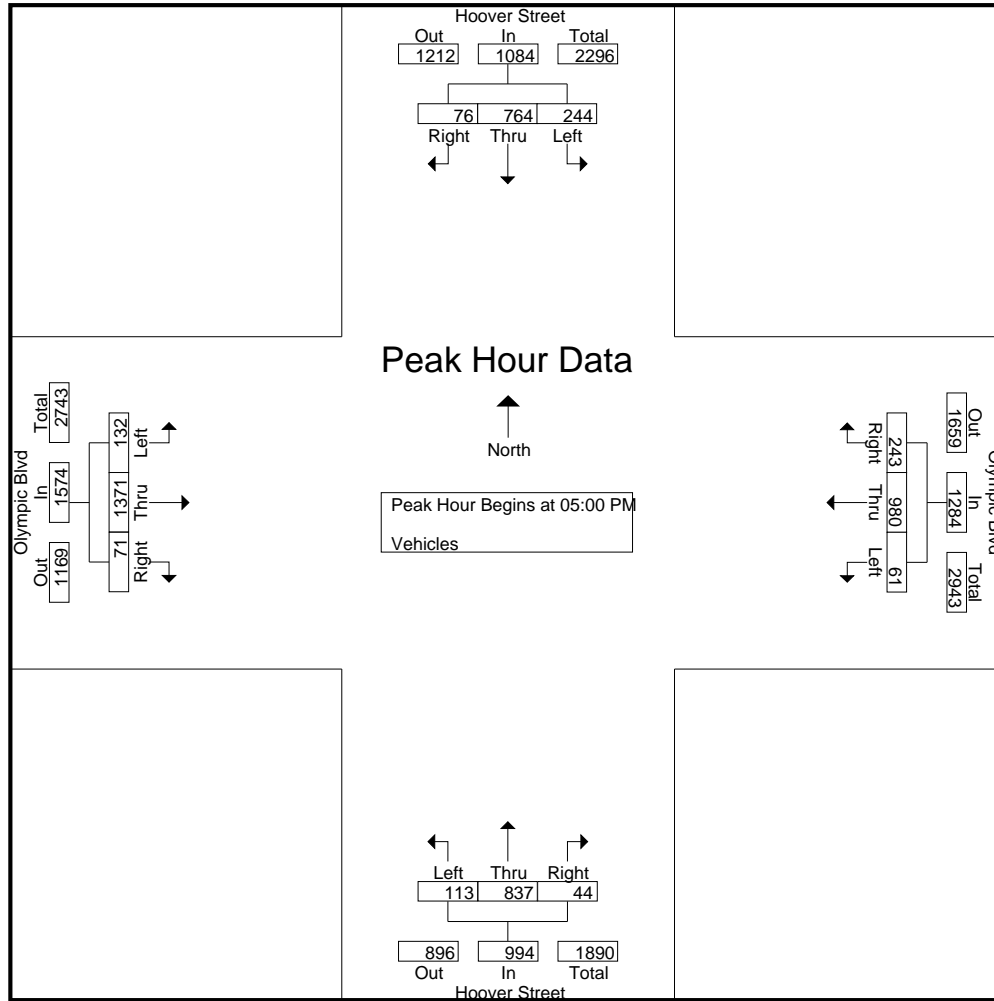
	Hoover Street Southbound				Olympic Blvd Westbound				Hoover Street Northbound				Olympic Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	49	173	20	242	13	251	47	311	21	220	11	252	42	226	13	281	1086
07:45 AM	58	176	16	250	14	296	45	355	31	265	6	302	48	271	22	341	1248
08:00 AM	78	196	20	294	13	289	35	337	23	226	7	256	29	302	25	356	1243
08:15 AM	62	180	27	269	14	246	35	295	7	221	14	242	35	281	26	342	1148
Total Volume	247	725	83	1055	54	1082	162	1298	82	932	38	1052	154	1080	86	1320	4725
% App. Total	23.4	68.7	7.9		4.2	83.4	12.5		7.8	88.6	3.6		11.7	81.8	6.5		
PHF	.792	.925	.769	.897	.964	.914	.862	.914	.661	.879	.679	.871	.802	.894	.827	.927	.947



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : HooverSt\_OlympicBlvd  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 3

	Hoover Street Southbound				Olympic Blvd Westbound				Hoover Street Northbound				Olympic Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	62	232	17	311	20	212	49	281	37	228	14	279	40	357	22	419	1290
05:15 PM	62	188	13	263	18	249	66	333	40	203	8	251	36	335	15	386	1233
05:30 PM	69	180	25	274	16	239	54	309	14	177	10	201	29	310	17	356	1140
05:45 PM	51	164	21	236	7	280	74	361	22	229	12	263	27	369	17	413	1273
Total Volume	244	764	76	1084	61	980	243	1284	113	837	44	994	132	1371	71	1574	4936
% App. Total	22.5	70.5	7		4.8	76.3	18.9		11.4	84.2	4.4		8.4	87.1	4.5		
PHF	.884	.823	.760	.871	.763	.875	.821	.889	.706	.914	.786	.891	.825	.929	.807	.939	.957



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : HooverSt\_OlympicBlvd\_BP  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 1

**Groups Printed- Pedestrians and Bikes**

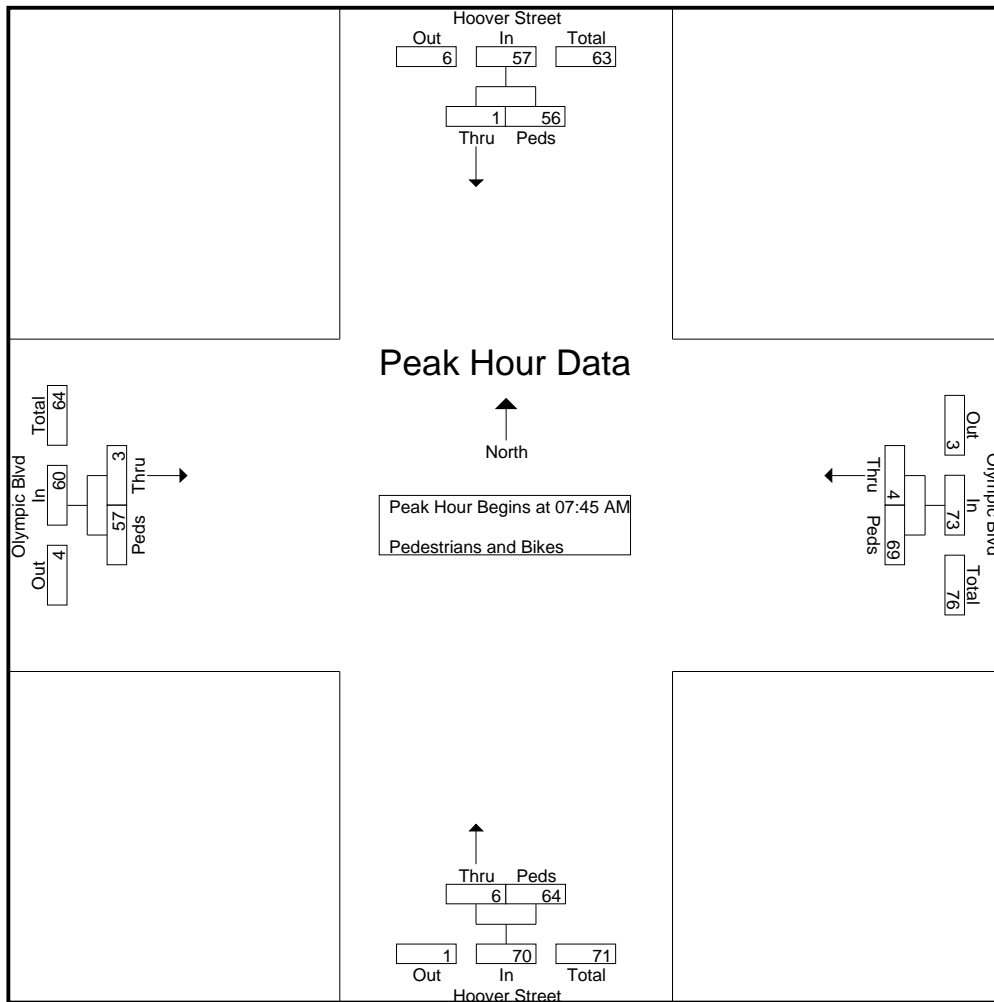
Start Time	Hoover Street Southbound		Olympic Blvd Westbound		Hoover Street Northbound		Olympic Blvd Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	3	8	1	13	0	3	0	5	33
07:15 AM	1	5	2	5	0	23	0	10	46
07:30 AM	1	16	0	17	0	7	0	8	49
07:45 AM	0	17	2	15	3	26	2	13	78
Total	5	46	5	50	3	59	2	36	206
08:00 AM	1	13	1	20	1	15	1	19	71
08:15 AM	0	17	0	12	1	10	0	16	56
08:30 AM	0	9	1	22	1	13	0	9	55
08:45 AM	3	4	0	11	2	12	0	2	34
Total	4	43	2	65	5	50	1	46	216
09:00 AM	0	4	0	11	0	7	0	1	23
09:15 AM	0	14	1	15	1	6	1	2	40
09:30 AM	0	5	0	13	0	6	0	7	31
09:45 AM	1	9	0	18	0	10	0	3	41
Total	1	32	1	57	1	29	1	13	135
03:00 PM	4	10	0	23	1	33	0	15	86
03:15 PM	6	26	1	8	1	5	1	17	65
03:30 PM	2	15	0	25	0	18	0	22	82
03:45 PM	2	16	3	21	1	28	0	4	75
Total	14	67	4	77	3	84	1	58	308
04:00 PM	1	14	1	17	1	19	0	6	59
04:15 PM	0	20	2	31	1	10	0	7	71
04:30 PM	3	24	2	31	0	15	0	10	85
04:45 PM	1	27	0	24	1	6	0	2	61
Total	5	85	5	103	3	50	0	25	276
05:00 PM	5	11	6	21	2	3	1	7	56
05:15 PM	0	11	3	15	0	20	1	2	52
05:30 PM	1	12	1	30	0	15	1	12	72
05:45 PM	2	28	0	26	0	9	1	10	76
Total	8	62	10	92	2	47	4	31	256
Grand Total	37	335	27	444	17	319	9	209	1397
Apprch %	9.9	90.1	5.7	94.3	5.1	94.9	4.1	95.9	
Total %	2.6	24	1.9	31.8	1.2	22.8	0.6	15	

# CITY TRAFFIC COUNTERS

[WWW.CTCOUNTERS.COM](http://WWW.CTCOUNTERS.COM)

File Name : HooverSt\_OlympicBlvd\_BP  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 2

	Hoover Street Southbound			Olympic Blvd Westbound			Hoover Street Northbound			Olympic Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	17	17	2	15	17	3	26	29	2	13	15	78
08:00 AM	1	13	14	1	20	21	1	15	16	1	19	20	71
08:15 AM	0	17	17	0	12	12	1	10	11	0	16	16	56
08:30 AM	0	9	9	1	22	23	1	13	14	0	9	9	55
Total Volume	1	56	57	4	69	73	6	64	70	3	57	60	260
% App. Total	1.8	98.2		5.5	94.5		8.6	91.4		5	95		
PHF	.250	.824	.838	.500	.784	.793	.500	.615	.603	.375	.750	.750	.833

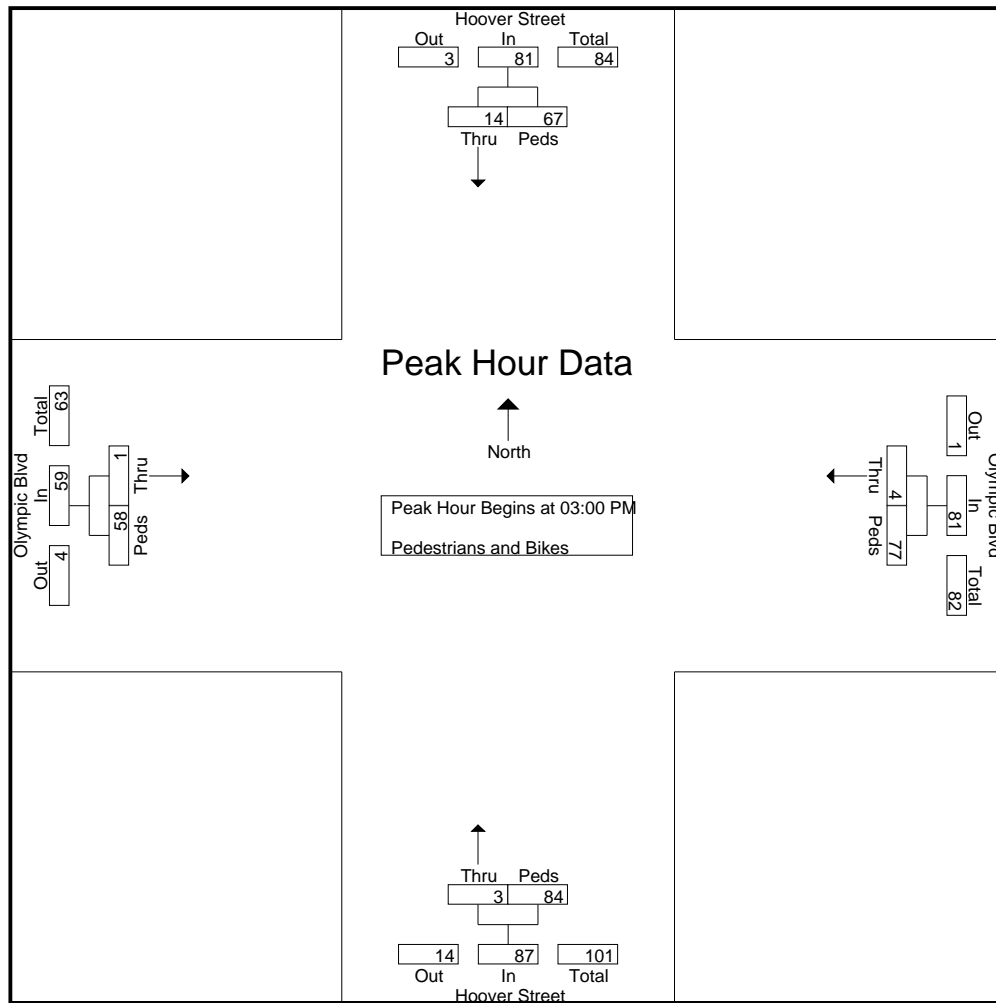




**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : HooverSt\_OlympicBlvd\_BP  
 Site Code : 00000000  
 Start Date : 4/28/2022  
 Page No : 3

	Hoover Street Southbound			Olympic Blvd Westbound			Hoover Street Northbound			Olympic Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:00 PM													
03:00 PM	4	10	14	0	23	23	1	33	34	0	15	15	86
03:15 PM	6	26	32	1	8	9	1	5	6	1	17	18	65
03:30 PM	2	15	17	0	25	25	0	18	18	0	22	22	82
03:45 PM	2	16	18	3	21	24	1	28	29	0	4	4	75
Total Volume	14	67	81	4	77	81	3	84	87	1	58	59	308
% App. Total	17.3	82.7		4.9	95.1		3.4	96.6		1.7	98.3		
PHF	.583	.644	.633	.333	.770	.810	.750	.636	.640	.250	.659	.670	.895



## **APPENDIX C**

### **VMT CALCULATOR DATA**

# CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



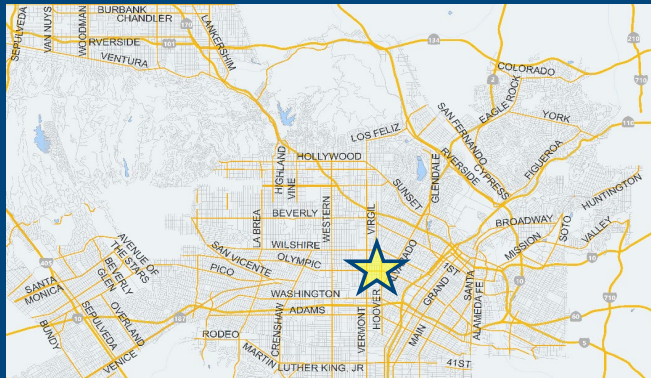
*Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?*

## Project Information

**Project:** Arapahoe Apartments

**Scenario:** [www](#)

**Address:** 957 S ARAPAHOE ST, 90006 [Q](#)



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☒ Yes ☐ No

## Existing Land Use

Land Use Type	Value	Unit
Housing   Multi-Family		DU
Housing   Single Family	1	DU
Housing   Multi-Family	4	DU

[Click here to add a single custom land use type \(will be included in the above list\)](#)

## Proposed Project Land Use

Land Use Type	Value	Unit
Housing   Multi-Family	109	DU
Housing   Multi-Family	109	DU

[Click here to add a single custom land use type \(will be included in the above list\)](#)

## Project Screening Summary

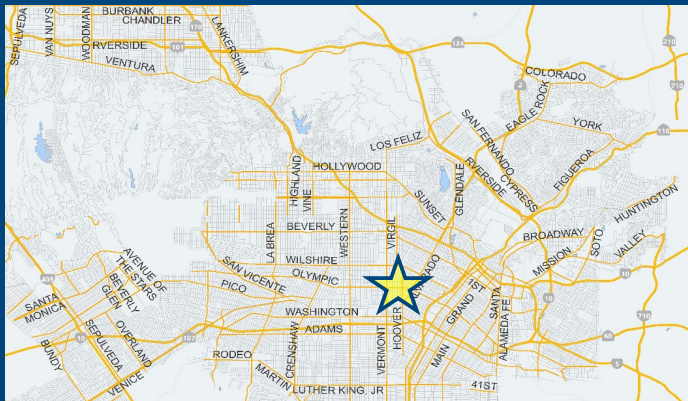
Existing Land Use	Proposed
<b>23</b> Daily Vehicle Trips	<b>445</b> Daily Vehicle Trips
<b>144</b> Daily VMT	<b>2,792</b> Daily VMT
<b>Tier 1 Screening Criteria</b>	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. <input type="checkbox"/>	
<b>Tier 2 Screening Criteria</b>	
The net increase in daily trips < 250 trips	<b>422</b> Net Daily Trips
The net increase in daily VMT ≤ 0	<b>2,648</b> Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	<b>0.000</b> ksf
<b>The proposed project is required to perform VMT analysis.</b>	

# CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



## Project Information

**Project:** Arapahoe Apartments  
**Scenario:**  
**Address:** 957 S ARAPAHOE ST, 90006



Proposed Project Land Use Type	Value	Unit
Housing   Multi-Family	109	DU

## TDM Strategies

Select each section to show individual strategies  
 Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
<b>Max Home Based TDM Achieved?</b>	No	No
<b>Max Work Based TDM Achieved?</b>	No	No

**A**
**Parking**

☒ Proposed Prj ☐ Mitigation
 

Reduce Parking Supply
 

100

 city code parking provision for the project site

☐ Proposed Prj ☐ Mitigation
 

74

 actual parking provision for the project site

☒ Proposed Prj ☐ Mitigation
 

Unbundle Parking
 

175

 monthly parking cost (dollar) for the project site

☒ Proposed Prj ☐ Mitigation
 

Parking Cash-Out
 

50

 percent of employees eligible

☒ Proposed Prj ☐ Mitigation
 

Price Workplace Parking
 

6.00

 daily parking charge (dollar)

☐ Proposed Prj ☐ Mitigation
 

50

 percent of employees subject to priced parking

☐ Proposed Prj ☐ Mitigation
 

Residential Area Parking Permits
 

200

 cost (dollar) of annual permit

- B** Transit
- C** Education & Encouragement
- D** Commute Trip Reductions
- E** Shared Mobility
- F** Bicycle Infrastructure
- G** Neighborhood Enhancement

## Analysis Results

Proposed Project	With Mitigation
<b>445</b> Daily Vehicle Trips	<b>445</b> Daily Vehicle Trips
<b>2,792</b> Daily VMT	<b>2,792</b> Daily VMT
<b>5.5</b> Household VMT per Capita	<b>5.5</b> Household VMT per Capita
<b>N/A</b> Work VMT per Employee	<b>N/A</b> Work VMT per Employee

Significant VMT Impact?	
<b>Household: No</b> Threshold = 6.0 15% Below APC	<b>Household: No</b> Threshold = 6.0 15% Below APC
<b>Work: N/A</b> Threshold = 7.6 15% Below APC	<b>Work: N/A</b> Threshold = 7.6 15% Below APC

# CITY OF LOS ANGELES VMT CALCULATOR

## Report 1: Project & Analysis Overview

Date: June 29, 2022

Project Name: Arapahoe Apartments

Project Scenario:

Project Address: 957 S ARAPAHOE ST, 90006



Version 1.3

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	109	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down	0.000	ksf
	Restaurant	0.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	0.000	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other		0	Trips

Project and Analysis Overview

1 of 2

# CITY OF LOS ANGELES VMT CALCULATOR

## Report 1: Project & Analysis Overview

Date: June 29, 2022

Project Name: Arapahoe Apartments

Project Scenario:

Project Address: 957 S ARAPAHOE ST, 90006



Version 1.3

Analysis Results			
Total Employees: 0			
Total Population: 246			
Proposed Project		With Mitigation	
445	Daily Vehicle Trips	445	Daily Vehicle Trips
2,792	Daily VMT	2,792	Daily VMT
5.5	Household VMT per Capita	5.5	Household VMT per Capita
N/A	Work VMT per Employee	N/A	Work VMT per Employee
Significant VMT Impact?			
APC: Central			
Impact Threshold: 15% Below APC Average			
Household = 6.0			
Work = 7.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 6.0	No	Household > 6.0	No
Work > 7.6	N/A	Work > 7.6	N/A

# CITY OF LOS ANGELES VMT CALCULATOR

## Report 4: MXD Methodology

Date: June 29, 2022

Project Name: Arapahoe Apartments

Project Scenario:

Project Address: 957 S ARAPAHOE ST, 90006



Version 1.3

### MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	98	-19.4%	79	7.7	755	608
Home Based Other Production	271	-48.0%	141	5.3	1,436	747
Non-Home Based Other Production	126	-4.0%	121	7.5	945	908
Home-Based Work Attraction	0	0.0%	0	7.6	0	0
Home-Based Other Attraction	129	-42.6%	74	4.8	619	355
Non-Home Based Other Attraction	31	-3.2%	30	5.8	180	174

### MXD Methodology with TDM Measures

	<i>Proposed Project</i>			<i>Project with Mitigation Measures</i>		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	0.0%	79	608	0.0%	79	608
Home Based Other Production	0.0%	141	747	0.0%	141	747
Non-Home Based Other Production	0.0%	121	908	0.0%	121	908
Home-Based Work Attraction	0.0%	0	0	0.0%	0	0
Home-Based Other Attraction	0.0%	74	355	0.0%	74	355
Non-Home Based Other Attraction	0.0%	30	174	0.0%	30	174

### MXD VMT Methodology Per Capita & Per Employee

Total Population: 246

Total Employees: 0

APC: Central

	<i>Proposed Project</i>	<i>Project with Mitigation Measures</i>
Total Home Based Production VMT	1,355	1,355
Total Home Based Work Attraction VMT	0	0
Total Home Based VMT Per Capita	5.5	5.5
Total Work Based VMT Per Employee	N/A	N/A



















## **APPENDIX D**

### **SYNCHRO ANALYSIS DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS**





















HCM 6th Signalized Intersection Summary  
1: Elden Ave & Olympic Blvd

Existing Conditions  
Weekday AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1163	20	14	1250	7	28	12	80	25	10	19
Future Volume (veh/h)	9	1163	20	14	1250	7	28	12	80	25	10	19
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	1264	22	15	1359	8	30	13	87	27	11	21
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	292	2858	50	247	2897	17	145	80	365	275	118	188
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	398	5168	90	430	5238	31	290	231	1055	644	340	544
Grp Volume(v), veh/h	10	832	454	15	883	484	130	0	0	59	0	0
Grp Sat Flow(s),veh/h/ln	398	1702	1854	430	1702	1865	1576	0	0	1527	0	0
Q Serve(g_s), s	1.2	14.5	14.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	14.5	14.5	15.4	0.0	0.0	5.5	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.02	0.23		0.67	0.46		0.36
Lane Grp Cap(c), veh/h	292	1882	1025	247	1882	1031	590	0	0	581	0	0
V/C Ratio(X)	0.03	0.44	0.44	0.06	0.47	0.47	0.22	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	292	1882	1025	247	1882	1031	590	0	0	581	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	13.2	13.2	2.0	0.0	0.0	23.2	0.0	0.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.8	1.4	0.5	0.8	1.5	0.9	0.0	0.0	0.4	0.0	0.0
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(95%),veh/ln	0.2	9.1	10.0	0.1	0.4	0.8	4.1	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	14.0	14.6	2.5	0.8	1.5	24.1	0.0	0.0	22.5	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h	1296			1382			130			59		
Approach Delay, s/veh	14.2			1.1			24.1			22.5		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			40.0			60.0			40.0		
Change Period (Y+Rc), s	* 4.7			* 5.4			* 4.7			* 5.4		
Max Green Setting (Gmax), s	* 55			* 35			* 55			* 35		
Max Q Clear Time (g_c+I1), s	17.4			4.3			16.5			7.5		
Green Ext Time (p_c), s	22.2			0.3			20.9			0.7		
Intersection Summary												
HCM 6th Ctrl Delay			8.5									
HCM 6th LOS			A									
Notes												



















HCM 6th Signalized Intersection Summary  
1: Elden Ave & Olympic Blvd

Existing Conditions  
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1459	26	49	1029	37	43	27	57	21	17	14
Future Volume (veh/h)	15	1459	26	49	1029	37	43	27	57	21	17	14
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	16	1586	28	53	1118	40	47	29	62	23	18	15
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	340	2857	50	183	2799	100	211	137	245	253	196	146
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	485	5167	91	313	5061	181	470	397	707	586	567	422
Grp Volume(v), veh/h	16	1045	569	53	752	406	138	0	0	56	0	0
Grp Sat Flow(s),veh/h/ln	485	1702	1854	313	1702	1838	1574	0	0	1574	0	0
Q Serve(g_s), s	1.5	19.8	19.8	8.7	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	19.8	19.8	28.5	0.0	0.0	5.9	0.0	0.0	2.1	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.10	0.34		0.45	0.41		0.27
Lane Grp Cap(c), veh/h	340	1882	1025	183	1882	1016	593	0	0	595	0	0
V/C Ratio(X)	0.05	0.56	0.56	0.29	0.40	0.40	0.23	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	340	1882	1025	183	1882	1016	593	0	0	595	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.3	14.4	14.4	5.1	0.0	0.0	23.3	0.0	0.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	2.2	3.9	0.6	1.2	0.9	0.0	0.0	0.3	0.0	0.0
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(95%),veh/ln	0.3	11.8	13.0	1.0	0.3	0.6	4.4	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	15.6	16.6	9.1	0.6	1.2	24.2	0.0	0.0	22.4	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h	1630			1211			138			56		
Approach Delay, s/veh	15.9			1.2			24.2			22.4		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			40.0			60.0			40.0		
Change Period (Y+Rc), s	* 4.7			* 5.4			* 4.7			* 5.4		
Max Green Setting (Gmax), s	* 55			* 35			* 55			* 35		
Max Q Clear Time (g_c+I1), s	30.5			4.1			21.8			7.9		
Green Ext Time (p_c), s	15.5			0.3			24.2			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	10.5											
HCM 6th LOS	B											
Notes												



















HCM 6th Signalized Intersection Summary  
1: Elden Ave & Olympic Blvd

Future Pre-Project Conditions  
Weekday AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1305	20	14	1381	7	29	12	82	26	10	19
Future Volume (veh/h)	9	1305	20	14	1381	7	29	12	82	26	10	19
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	1418	22	15	1501	8	32	13	89	28	11	21
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	264	2864	44	215	2899	15	149	78	362	280	116	185
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	347	5180	80	371	5241	28	303	226	1045	658	334	534
Grp Volume(v), veh/h	10	932	508	15	975	534	134	0	0	60	0	0
Grp Sat Flow(s),veh/h/ln	347	1702	1856	371	1702	1865	1574	0	0	1525	0	0
Q Serve(g_s), s	1.3	16.9	16.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	16.9	16.9	18.2	0.0	0.0	5.7	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.01	0.24		0.66	0.47		0.35
Lane Grp Cap(c), veh/h	264	1882	1026	215	1882	1032	589	0	0	581	0	0
V/C Ratio(X)	0.04	0.50	0.50	0.07	0.52	0.52	0.23	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	264	1882	1026	215	1882	1032	589	0	0	581	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.3	13.8	13.8	2.8	0.0	0.0	23.3	0.0	0.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.9	1.7	0.6	1.0	1.9	0.9	0.0	0.0	0.4	0.0	0.0
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(95%),veh/ln	0.2	10.3	11.3	0.2	0.5	1.0	4.3	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	14.7	15.5	3.4	1.0	1.9	24.1	0.0	0.0	22.5	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h	1450			1524			134			60		
Approach Delay, s/veh	14.9			1.3			24.1			22.5		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			40.0			60.0			40.0		
Change Period (Y+Rc), s	* 4.7			* 5.4			* 4.7			* 5.4		
Max Green Setting (Gmax), s	* 55			* 35			* 55			* 35		
Max Q Clear Time (g_c+I1), s	20.2			4.3			18.9			7.7		
Green Ext Time (p_c), s	23.5			0.3			22.9			0.8		
Intersection Summary												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									
Notes												



















HCM 6th Signalized Intersection Summary  
1: Elden Ave & Olympic Blvd

Future Pre-Project Conditions  
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1601	27	50	1154	38	44	28	58	21	17	14
Future Volume (veh/h)	15	1601	27	50	1154	38	44	28	58	21	17	14
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	16	1740	29	54	1254	41	48	30	63	23	18	15
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	307	2861	48	160	2808	92	211	139	243	253	196	146
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	426	5173	86	270	5079	166	470	401	704	586	567	422
Grp Volume(v), veh/h	16	1145	624	54	840	455	141	0	0	56	0	0
Grp Sat Flow(s),veh/h/ln	426	1702	1855	270	1702	1840	1575	0	0	1574	0	0
Q Serve(g_s), s	1.7	22.7	22.7	12.9	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	22.7	22.7	35.5	0.0	0.0	6.0	0.0	0.0	2.1	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.09	0.34		0.45	0.41		0.27
Lane Grp Cap(c), veh/h	307	1882	1026	160	1882	1018	593	0	0	595	0	0
V/C Ratio(X)	0.05	0.61	0.61	0.34	0.45	0.45	0.24	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	307	1882	1026	160	1882	1018	593	0	0	595	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.4	15.1	15.1	7.3	0.0	0.0	23.3	0.0	0.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.5	2.7	5.6	0.8	1.4	0.9	0.0	0.0	0.3	0.0	0.0
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(95%),veh/ln	0.3	13.2	14.6	1.3	0.4	0.7	4.5	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	16.5	17.7	12.9	0.8	1.4	24.3	0.0	0.0	22.4	0.0	0.0
LnGrp LOS	B	B	B	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h	1785			1349			141			56		
Approach Delay, s/veh	16.9			1.5			24.3			22.4		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			40.0			60.0			40.0		
Change Period (Y+Rc), s	* 4.7			* 5.4			* 4.7			* 5.4		
Max Green Setting (Gmax), s	* 55			* 35			* 55			* 35		
Max Q Clear Time (g_c+I1), s	37.5			4.1			24.7			8.0		
Green Ext Time (p_c), s	13.2			0.3			24.4			0.8		
Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									
Notes												



















HCM 6th Signalized Intersection Summary  
1: Elden Ave & Olympic Blvd




Future With Project Conditions  
Weekday AM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1307	20	14	1387	7	29	12	82	26	10	19
Future Volume (veh/h)	9	1307	20	14	1387	7	29	12	82	26	10	19
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	1421	22	15	1508	8	32	13	89	28	11	21
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	263	2864	44	214	2899	15	149	78	362	280	116	185
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	345	5180	80	370	5242	28	303	226	1045	658	334	534
Grp Volume(v), veh/h	10	934	509	15	979	537	134	0	0	60	0	0
Grp Sat Flow(s),veh/h/ln	345	1702	1856	370	1702	1865	1574	0	0	1525	0	0
Q Serve(g_s), s	1.3	16.9	16.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	16.9	16.9	18.2	0.0	0.0	5.7	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.01	0.24		0.66	0.47		0.35
Lane Grp Cap(c), veh/h	263	1882	1026	214	1882	1032	589	0	0	581	0	0
V/C Ratio(X)	0.04	0.50	0.50	0.07	0.52	0.52	0.23	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	263	1882	1026	214	1882	1032	589	0	0	581	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.3	13.8	13.8	2.8	0.0	0.0	23.3	0.0	0.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.9	1.7	0.6	1.0	1.9	0.9	0.0	0.0	0.4	0.0	0.0
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(95%),veh/ln	0.2	10.3	11.4	0.2	0.5	1.0	4.3	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	14.7	15.5	3.4	1.0	1.9	24.1	0.0	0.0	22.5	0.0	0.0
LnGrp LOS	B	B	B	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h	1453			1531			134			60		
Approach Delay, s/veh	14.9			1.4			24.1			22.5		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			40.0			60.0			40.0		
Change Period (Y+Rc), s	* 4.7			* 5.4			* 4.7			* 5.4		
Max Green Setting (Gmax), s	* 55			* 35			* 55			* 35		
Max Q Clear Time (g_c+I1), s	20.2			4.3			18.9			7.7		
Green Ext Time (p_c), s	23.6			0.3			22.9			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	8.9											
HCM 6th LOS	A											
Notes												

HCM 6th Signalized Intersection Summary  
1: Elden Ave & Olympic Blvd




Future With Project Conditions  
Weekday PM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1606	27	50	1157	38	44	28	58	21	17	14
Future Volume (veh/h)	15	1606	27	50	1157	38	44	28	58	21	17	14
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	16	1746	29	54	1258	41	48	30	63	23	18	15
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	307	2861	48	159	2809	92	211	139	243	253	196	146
Arrive On Green	0.55	0.55	0.55	1.00	1.00	1.00	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	424	5173	86	268	5079	166	470	401	704	586	567	422
Grp Volume(v), veh/h	16	1149	626	54	843	456	141	0	0	56	0	0
Grp Sat Flow(s),veh/h/ln	424	1702	1855	268	1702	1841	1575	0	0	1574	0	0
Q Serve(g_s), s	1.8	22.8	22.8	13.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	22.8	22.8	35.8	0.0	0.0	6.0	0.0	0.0	2.1	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.09	0.34		0.45	0.41		0.27
Lane Grp Cap(c), veh/h	307	1882	1026	159	1882	1018	593	0	0	595	0	0
V/C Ratio(X)	0.05	0.61	0.61	0.34	0.45	0.45	0.24	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	307	1882	1026	159	1882	1018	593	0	0	595	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.4	15.1	15.1	7.4	0.0	0.0	23.3	0.0	0.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.5	2.7	5.7	0.8	1.4	0.9	0.0	0.0	0.3	0.0	0.0
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(95%),veh/ln	0.3	13.2	14.6	1.3	0.4	0.7	4.5	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	16.6	17.8	13.1	0.8	1.4	24.3	0.0	0.0	22.4	0.0	0.0
LnGrp LOS	B	B	B	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h	1791			1353			141			56		
Approach Delay, s/veh	16.9			1.5			24.3			22.4		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			40.0			60.0			40.0		
Change Period (Y+Rc), s	* 4.7			* 5.4			* 4.7			* 5.4		
Max Green Setting (Gmax), s	* 55			* 35			* 55			* 35		
Max Q Clear Time (g_c+I1), s	37.8			4.1			24.8			8.0		
Green Ext Time (p_c), s	13.1			0.3			24.4			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	11.1											
HCM 6th LOS	B											
Notes												




Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	16	26	102	27	39
Future Vol, veh/h	85	16	26	102	27	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	17	28	111	29	42
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	109	0	268	101
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	167	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1481	-	721	954
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1481	-	707	954
Mov Cap-2 Maneuver	-	-	-	-	707	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	846	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.5		9.7		
HCM LOS				A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	835	-	-	1481	-	
HCM Lane V/C Ratio	0.086	-	-	0.019	-	
HCM Control Delay (s)	9.7	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	




Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	33	25	91	23	25
Future Vol, veh/h	70	33	25	91	23	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	36	27	99	25	27
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	112	0	247	94
Stage 1	-	-	-	-	94	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1478	-	741	963
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1478	-	727	963
Mov Cap-2 Maneuver	-	-	-	-	727	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	858	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.6		9.6		
HCM LOS				A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	833	-	-	1478	-	
HCM Lane V/C Ratio	0.063	-	-	0.018	-	
HCM Control Delay (s)	9.6	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	



Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	89	21	32	105	29	41
Future Vol, veh/h	89	21	32	105	29	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	23	35	114	32	45
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	120	0	293	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	184	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1468	-	698	945
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1468	-	681	945
Mov Cap-2 Maneuver	-	-	-	-	681	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	827	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.8		9.9		
HCM LOS				A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	814	-	-	1468	-	
HCM Lane V/C Ratio	0.093	-	-	0.024	-	
HCM Control Delay (s)	9.9	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	36	28	95	28	31
Future Vol, veh/h	72	36	28	95	28	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	39	30	103	30	34
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	117	0	261	98
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	163	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1471	-	728	958
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	866	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1471	-	712	958
Mov Cap-2 Maneuver	-	-	-	-	712	-
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	847	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.7		9.7		
HCM LOS				A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	823	-	-	1471	-	
HCM Lane V/C Ratio	0.078	-	-	0.021	-	
HCM Control Delay (s)	9.7	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	89	22	35	105	32	50
Future Vol, veh/h	89	22	35	105	32	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	24	38	114	35	54
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	121	0	299	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	190	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1467	-	692	945
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	842	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1467	-	673	945
Mov Cap-2 Maneuver	-	-	-	-	673	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	818	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.9		10		
HCM LOS				B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	816	-	-	1467	-	
HCM Lane V/C Ratio	0.109	-	-	0.026	-	
HCM Control Delay (s)	10	-	-	7.5	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	39	36	95	30	36
Future Vol, veh/h	72	39	36	95	30	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	42	39	103	33	39
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	120	0	280	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	181	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1468	-	710	957
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1468	-	690	957
Mov Cap-2 Maneuver	-	-	-	-	690	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	826	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.1		9.9	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	814	-	-	1468	-	
HCM Lane V/C Ratio	0.088	-	-	0.027	-	
HCM Control Delay (s)	9.9	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection												
Int Delay, s/veh	25.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	🚗 🚗🚗🚗			🚗 🚗🚗🚗				🚗🚗			🚗🚗	
Traffic Vol, veh/h	9	1199	49	71	1227	12	13	2	119	17	7	42
Future Vol, veh/h	9	1199	49	71	1227	12	13	2	119	17	7	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	80	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1303	53	77	1334	13	14	2	129	18	8	46
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1347	0	0	1356	0	0	2042	2851	678	2037	2871	674
Stage 1	-	-	-	-	-	-	1350	1350	-	1495	1495	-
Stage 2	-	-	-	-	-	-	692	1501	-	542	1376	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	265	-	-	262	-	-	60	17	338	60	16	341
Stage 1	-	-	-	-	-	-	113	217	-	89	185	-
Stage 2	-	-	-	-	-	-	364	183	-	449	211	-
Platoon blocked, %		-	-		-	-			-			
Mov Cap-1 Maneuver	265	-	-	262	-	-	18	12	338	24	11	341
Mov Cap-2 Maneuver	-	-	-	-	-	-	18	12	-	24	11	-
Stage 1	-	-	-	-	-	-	109	209	-	86	131	-
Stage 2	-	-	-	-	-	-	210	129	-	264	203	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.3			279.2			\$ 493		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	108		265	-	-	262	-	-	45			
HCM Lane V/C Ratio	1.349		0.037	-	-	0.295	-	-	1.594			
HCM Control Delay (s)	279.2		19.1	-	-	24.4	-	-	\$ 493			
HCM Lane LOS	F		C	-	-	C	-	-	F			
HCM 95th %tile Q(veh)	10.1		0.1	-	-	1.2	-	-	7.1			
Notes												
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												

Intersection												
Int Delay, s/veh	15											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	🚗 🚗🚗🚗			🚗 🚗🚗🚗				🚗🚗			🚗🚗	
Traffic Vol, veh/h	17	1518	57	43	1077	27	8	4	113	4	3	24
Future Vol, veh/h	17	1518	57	43	1077	27	8	4	113	4	3	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	80	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	1650	62	47	1171	29	9	4	123	4	3	26
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1200	0	0	1712	0	0	2281	3011	856	1978	3028	600
Stage 1	-	-	-	-	-	-	1717	1717	-	1280	1280	-
Stage 2	-	-	-	-	-	-	564	1294	-	698	1748	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	313	-	-	175	-	-	42	13	259	66	13	381
Stage 1	-	-	-	-	-	-	62	143	-	127	235	-
Stage 2	-	-	-	-	-	-	436	231	-	361	138	-
Platoon blocked, %		-	-		-	-			-			
Mov Cap-1 Maneuver	313	-	-	175	-	-	22	9	259	17	9	381
Mov Cap-2 Maneuver	-	-	-	-	-	-	22	9	-	17	9	-
Stage 1	-	-	-	-	-	-	58	135	-	120	172	-
Stage 2	-	-	-	-	-	-	291	169	-	173	130	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			1.2			290.6			174.5		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	100	313	-	-	175	-	-	49				
HCM Lane V/C Ratio	1.359	0.059	-	-	0.267	-	-	0.688				
HCM Control Delay (s)	290.6	17.2	-	-	32.9	-	-	174.5				
HCM Lane LOS	F	C	-	-	D	-	-	F				
HCM 95th %tile Q(veh)	9.7	0.2	-	-	1	-	-	2.7				

Intersection												
Int Delay, s/veh	33											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	🚗 🚗🚗🚗			🚗 🚗🚗🚗				🚗🚗			🚗🚗	
Traffic Vol, veh/h	10	1341	50	72	1355	14	13	2	121	23	7	46
Future Vol, veh/h	10	1341	50	72	1355	14	13	2	121	23	7	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	80	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	1458	54	78	1473	15	14	2	132	25	8	50
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1488	0	0	1512	0	0	2256	3151	756	2243	3171	744
Stage 1	-	-	-	-	-	-	1507	1507	-	1637	1637	-
Stage 2	-	-	-	-	-	-	749	1644	-	606	1534	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	226	-	-	220	-	-	44	11	301	45	10	306
Stage 1	-	-	-	-	-	-	87	182	-	71	157	-
Stage 2	-	-	-	-	-	-	336	156	-	411	177	-
Platoon blocked, %		-	-		-	-			-			
Mov Cap-1 Maneuver	226	-	-	220	-	-	-	7	301	~ 14	~ 6	306
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	7	-	~ 14	~ 6	-
Stage 1	-	-	-	-	-	-	83	173	-	68	101	-
Stage 2	-	-	-	-	-	-	168	101	-	217	168	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			1.5						\$ 1295.1		
HCM LOS							-			F		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	-		226	-	-	220	-	-	26			
HCM Lane V/C Ratio	-		0.048	-	-	0.356	-	-	3.177			
HCM Control Delay (s)	-		21.7	-	-	30.1	-	-	-\$ 1295.1			
HCM Lane LOS	-		C	-	-	D	-	-	F			
HCM 95th %tile Q(veh)	-		0.2	-	-	1.5	-	-	10.1			
Notes												
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												

Intersection												
Int Delay, s/veh	44.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	🚗 🚗🚗🚗			🚗 🚗🚗🚗				🚗🚗			🚗🚗	
Traffic Vol, veh/h	20	1659	58	44	1201	34	8	4	115	7	3	26
Future Vol, veh/h	20	1659	58	44	1201	34	8	4	115	7	3	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	80	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	1803	63	48	1305	37	9	4	125	8	3	28
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1342	0	0	1866	0	0	2499	3317	933	2187	3330	671
Stage 1	-	-	-	-	-	-	1879	1879	-	1420	1420	-
Stage 2	-	-	-	-	-	-	620	1438	-	767	1910	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	267	-	-	146	-	-	31	8	230	48	8	342
Stage 1	-	-	-	-	-	-	47	119	-	101	201	-
Stage 2	-	-	-	-	-	-	403	197	-	328	115	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	267	-	-	146	-	-	10	5	230	~ 4	5	342
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	5	-	~ 4	5	-
Stage 1	-	-	-	-	-	-	43	109	-	93	135	-
Stage 2	-	-	-	-	-	-	242	132	-	132	106	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			1.4			\$ 742.1			\$ 1249.4		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	60		267	-	-	146	-	-	15			
HCM Lane V/C Ratio	2.301		0.081	-	-	0.328	-	-	2.609			
HCM Control Delay (s)	\$ 742.1		19.7	-	-	41.2	-	-	-\$ 1249.4			
HCM Lane LOS	F		C	-	-	E	-	-	F			
HCM 95th %tile Q(veh)	13.6		0.3	-	-	1.3	-	-	5.6			
Notes												
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												























Intersection												
Int Delay, s/veh	58.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	🚗 🚗🚗🚗			🚗 🚗🚗🚗				🚗🚗			🚗🚗	
Traffic Vol, veh/h	12	1341	50	72	1355	18	13	2	121	35	7	52
Future Vol, veh/h	12	1341	50	72	1355	18	13	2	121	35	7	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	80	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1458	54	78	1473	20	14	2	132	38	8	57
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1493	0	0	1512	0	0	2260	3160	756	2249	3177	747
Stage 1	-	-	-	-	-	-	1511	1511	-	1639	1639	-
Stage 2	-	-	-	-	-	-	749	1649	-	610	1538	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	225	-	-	220	-	-	44	10	301	44	10	305
Stage 1	-	-	-	-	-	-	87	181	-	70	157	-
Stage 2	-	-	-	-	-	-	336	155	-	409	176	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	225	-	-	220	-	-	-	6	301	~ 13	~ 6	305
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	6	-	~ 13	~ 6	-
Stage 1	-	-	-	-	-	-	82	171	-	66	101	-
Stage 2	-	-	-	-	-	-	163	100	-	214	166	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			1.5						\$ 1891.4		
HCM LOS							-			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	225	-	-	220	-	-	23				
HCM Lane V/C Ratio	-	0.058	-	-	0.356	-	-	4.442				
HCM Control Delay (s)	-	22	-	-	30.1	-	-	\$ 1891.4				
HCM Lane LOS	-	C	-	-	D	-	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	1.5	-	-	12.9				
Notes												
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												

Intersection												
Int Delay, s/veh	63											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	🚗 🚗🚗🚗			🚗 🚗🚗🚗				🚗🚗			🚗🚗	
Traffic Vol, veh/h	25	1659	58	44	1201	44	8	4	115	13	3	29
Future Vol, veh/h	25	1659	58	44	1201	44	8	4	115	13	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	80	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1803	63	48	1305	48	9	4	125	14	3	32
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1353	0	0	1866	0	0	2509	3338	933	2202	3345	677
Stage 1	-	-	-	-	-	-	1889	1889	-	1425	1425	-
Stage 2	-	-	-	-	-	-	620	1449	-	777	1920	-
Critical Hdwy	5.34	-	-	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	263	-	-	146	-	-	30	8	230	47	8	339
Stage 1	-	-	-	-	-	-	46	117	-	100	200	-
Stage 2	-	-	-	-	-	-	403	194	-	323	113	-
Platoon blocked, %		-	-		-	-			-			
Mov Cap-1 Maneuver	263	-	-	146	-	-	9	5	230	~ 4	5	339
Mov Cap-2 Maneuver	-	-	-	-	-	-	9	5	-	~ 4	5	-
Stage 1	-	-	-	-	-	-	41	105	-	90	134	-
Stage 2	-	-	-	-	-	-	239	130	-	127	101	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.4			\$ 781.2			\$ 2228.6		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	58		263	-	-	146	-	-	11			
HCM Lane V/C Ratio	2.38		0.103	-	-	0.328	-	-	4.447			
HCM Control Delay (s)	\$ 781.2		20.3	-	-	41.2	-	-	-\$ 2228.6			
HCM Lane LOS	F		C	-	-	E	-	-	F			
HCM 95th %tile Q(veh)	13.8		0.3	-	-	1.3	-	-	7.3			
Notes												
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												





















HCM 6th Signalized Intersection Summary  
4: Hoover St & Olympic Blvd

Existing Conditions  
Weekday AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1080	86	54	1082	162	82	932	38	247	725	83
Future Volume (veh/h)	154	1080	86	54	1082	162	82	932	38	247	725	83
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	167	1174	93	59	1176	176	89	1013	41	268	788	90
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	153	1682	133	100	1430	214	114	1030	42	151	1019	116
Arrive On Green	0.17	0.70	0.70	0.06	0.32	0.32	0.06	0.30	0.30	0.09	0.32	0.32
Sat Flow, veh/h	1781	4824	382	1781	4483	671	1781	3481	141	1781	3214	367
Grp Volume(v), veh/h	167	828	439	59	893	459	89	517	537	268	436	442
Grp Sat Flow(s),veh/h/ln	1781	1702	1802	1781	1702	1750	1781	1777	1845	1781	1777	1804
Q Serve(g_s), s	8.6	14.4	14.4	3.2	24.2	24.2	4.9	28.9	28.9	8.5	22.2	22.2
Cycle Q Clear(g_c), s	8.6	14.4	14.4	3.2	24.2	24.2	4.9	28.9	28.9	8.5	22.2	22.2
Prop In Lane	1.00		0.21	1.00		0.38	1.00		0.08	1.00		0.20
Lane Grp Cap(c), veh/h	153	1187	628	100	1086	558	114	526	546	151	563	572
V/C Ratio(X)	1.09	0.70	0.70	0.59	0.82	0.82	0.78	0.98	0.98	1.77	0.77	0.77
Avail Cap(c_a), veh/h	153	1187	628	153	1086	558	151	526	546	151	563	572
HCM Platoon Ratio	2.00	2.00	2.00	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	41.4	12.0	12.0	46.0	31.4	31.4	46.1	35.0	35.0	45.8	30.9	30.9
Incr Delay (d2), s/veh	98.9	3.4	6.3	5.4	7.0	12.9	16.9	35.3	34.6	372.0	9.9	9.8
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(95%),veh/ln	12.4	6.9	8.0	2.8	16.0	17.5	4.8	23.9	24.6	31.1	16.1	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.3	15.5	18.4	51.4	38.5	44.3	63.0	70.2	69.5	417.7	40.9	40.7
LnGrp LOS	F	B	B	D	D	D	E	E	E	F	D	D
Approach Vol, veh/h	1434			1411			1143			1146		
Approach Delay, s/veh	30.9			40.9			69.3			128.9		
Approach LOS	C			D			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	37.0	11.9	37.1	11.0	40.0	14.0	35.0				
Change Period (Y+Rc), s	* 5.4	5.1	* 5.5	* 5.4	* 5.4	5.1	* 5.5	* 5.4				
Max Green Setting (Gmax), s	* 8.6	31.9	* 8.5	* 30	* 8.6	31.9	* 8.5	* 30				
Max Q Clear Time (g_c+I1), s	10.6	26.2	6.9	24.2	5.2	16.4	10.5	30.9				
Green Ext Time (p_c), s	0.0	4.8	0.0	2.5	0.0	11.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	64.1											
HCM 6th LOS	E											
Notes												





















HCM 6th Signalized Intersection Summary  
4: Hoover St & Olympic Blvd

Existing Conditions  
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	1371	71	61	980	243	113	837	44	244	764	76
Future Volume (veh/h)	132	1371	71	61	980	243	113	837	44	244	764	76
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	143	1490	77	66	1065	264	123	910	48	265	830	83
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	153	1721	89	105	1302	323	151	1016	54	151	966	97
Arrive On Green	0.17	0.69	0.69	0.06	0.32	0.32	0.08	0.30	0.30	0.09	0.30	0.30
Sat Flow, veh/h	1781	4971	257	1781	4081	1011	1781	3433	181	1781	3262	326
Grp Volume(v), veh/h	143	1020	547	66	888	441	123	471	487	265	452	461
Grp Sat Flow(s),veh/h/ln	1781	1702	1824	1781	1702	1688	1781	1777	1838	1781	1777	1812
Q Serve(g_s), s	7.9	23.0	23.0	3.6	24.0	24.1	6.8	25.4	25.4	8.5	24.0	24.0
Cycle Q Clear(g_c), s	7.9	23.0	23.0	3.6	24.0	24.1	6.8	25.4	25.4	8.5	24.0	24.0
Prop In Lane	1.00		0.14	1.00		0.60	1.00		0.10	1.00		0.18
Lane Grp Cap(c), veh/h	153	1178	631	105	1086	539	151	526	544	151	526	536
V/C Ratio(X)	0.93	0.87	0.87	0.63	0.82	0.82	0.81	0.90	0.90	1.75	0.86	0.86
Avail Cap(c_a), veh/h	153	1178	631	153	1086	539	151	526	544	151	526	536
HCM Platoon Ratio	2.00	2.00	2.00	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	41.1	13.6	13.6	46.0	31.4	31.4	45.0	33.7	33.7	45.8	33.2	33.2
Incr Delay (d2), s/veh	53.2	8.6	14.8	6.1	6.9	13.0	27.4	20.4	19.9	363.4	16.6	16.3
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(95%),veh/ln	9.2	9.5	11.5	3.2	15.8	16.9	7.4	19.5	20.0	30.5	18.2	18.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.3	22.2	28.4	52.1	38.2	44.4	72.4	54.1	53.6	409.1	49.8	49.6
LnGrp LOS	F	C	C	D	D	D	E	D	D	F	D	D
Approach Vol, veh/h	1710			1395			1081			1178		
Approach Delay, s/veh	30.2			40.8			56.0			130.5		
Approach LOS	C			D			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	37.0	14.0	35.0	11.3	39.7	14.0	35.0				
Change Period (Y+Rc), s	* 5.4	5.1	* 5.5	* 5.4	* 5.4	5.1	* 5.5	* 5.4				
Max Green Setting (Gmax), s	* 8.6	31.9	* 8.5	* 30	* 8.6	31.9	* 8.5	* 30				
Max Q Clear Time (g_c+I1), s	9.9	26.1	8.8	26.0	5.6	25.0	10.5	27.4				
Green Ext Time (p_c), s	0.0	4.8	0.0	1.8	0.0	6.0	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay	60.2											
HCM 6th LOS	E											
Notes												





















HCM 6th Signalized Intersection Summary  
4: Hoover St & Olympic Blvd

Future Pre-Project Conditions  
Weekday AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	1214	91	55	1191	183	85	1003	39	279	879	102
Future Volume (veh/h)	166	1214	91	55	1191	183	85	1003	39	279	879	102
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	180	1320	99	60	1295	199	92	1090	42	303	955	111
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	153	1687	127	101	1424	219	117	1033	40	151	1012	118
Arrive On Green	0.17	0.70	0.70	0.06	0.32	0.32	0.07	0.30	0.30	0.09	0.32	0.32
Sat Flow, veh/h	1781	4846	363	1781	4465	686	1781	3489	134	1781	3207	373
Grp Volume(v), veh/h	180	927	492	60	987	507	92	555	577	303	529	537
Grp Sat Flow(s),veh/h/ln	1781	1702	1805	1781	1702	1747	1781	1777	1846	1781	1777	1803
Q Serve(g_s), s	8.6	18.2	18.2	3.3	27.8	27.8	5.1	29.6	29.6	8.5	29.0	29.0
Cycle Q Clear(g_c), s	8.6	18.2	18.2	3.3	27.8	27.8	5.1	29.6	29.6	8.5	29.0	29.0
Prop In Lane	1.00		0.20	1.00		0.39	1.00		0.07	1.00		0.21
Lane Grp Cap(c), veh/h	153	1185	629	101	1086	557	117	526	546	151	560	569
V/C Ratio(X)	1.17	0.78	0.78	0.59	0.91	0.91	0.79	1.06	1.06	2.00	0.94	0.94
Avail Cap(c_a), veh/h	153	1185	629	153	1086	557	151	526	546	151	560	569
HCM Platoon Ratio	2.00	2.00	2.00	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	41.4	12.6	12.7	46.0	32.7	32.7	46.0	35.2	35.2	45.8	33.4	33.4
Incr Delay (d2), s/veh	127.5	5.2	9.4	5.4	12.7	21.3	18.4	54.7	54.0	473.2	26.4	26.2
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(95%),veh/ln	14.4	8.1	9.4	2.9	18.8	20.8	5.1	28.6	29.5	37.7	22.7	22.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	168.9	17.8	22.0	51.5	45.3	53.9	64.4	89.9	89.2	518.9	59.8	59.6
LnGrp LOS	F	B	C	D	D	D	E	F	F	F	E	E
Approach Vol, veh/h	1599			1554			1224			1369		
Approach Delay, s/veh	36.1			48.4			87.7			161.3		
Approach LOS	D			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	37.0	12.1	36.9	11.1	39.9	14.0	35.0				
Change Period (Y+Rc), s	* 5.4	5.1	* 5.5	* 5.4	* 5.4	5.1	* 5.5	* 5.4				
Max Green Setting (Gmax), s	* 8.6	31.9	* 8.5	* 30	* 8.6	31.9	* 8.5	* 30				
Max Q Clear Time (g_c+I1), s	10.6	29.8	7.1	31.0	5.3	20.2	10.5	31.6				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.0	0.0	9.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	80.2											
HCM 6th LOS	F											
Notes												





















HCM 6th Signalized Intersection Summary  
4: Hoover St & Olympic Blvd

Future Pre-Project Conditions  
Weekday PM Peak Hour

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	152	1494	74	62	1095	269	118	946	45	266	851	88		
Future Volume (veh/h)	152	1494	74	62	1095	269	118	946	45	266	851	88		
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	165	1624	80	67	1190	292	128	1028	49	289	925	96		
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	153	1724	85	105	1305	320	151	1022	49	151	962	100		
Arrive On Green	0.17	0.69	0.69	0.06	0.32	0.32	0.09	0.30	0.30	0.09	0.30	0.30		
Sat Flow, veh/h	1781	4985	245	1781	4090	1004	1781	3453	165	1781	3249	337		
Grp Volume(v), veh/h	165	1109	595	67	990	492	128	529	548	289	506	515		
Grp Sat Flow(s),veh/h/ln	1781	1702	1826	1781	1702	1690	1781	1777	1841	1781	1777	1810		
Q Serve(g_s), s	8.6	28.8	28.9	3.7	27.9	27.9	7.1	29.6	29.6	8.5	28.0	28.0		
Cycle Q Clear(g_c), s	8.6	28.8	28.9	3.7	27.9	27.9	7.1	29.6	29.6	8.5	28.0	28.0		
Prop In Lane	1.00		0.13	1.00		0.59	1.00		0.09	1.00		0.19		
Lane Grp Cap(c), veh/h	153	1177	632	105	1086	539	151	526	545	151	526	536		
V/C Ratio(X)	1.08	0.94	0.94	0.64	0.91	0.91	0.85	1.01	1.01	1.91	0.96	0.96		
Avail Cap(c_a), veh/h	153	1177	632	153	1086	539	151	526	545	151	526	536		
HCM Platoon Ratio	2.00	2.00	2.00	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	41.4	14.5	14.5	46.0	32.7	32.7	45.1	35.2	35.2	45.8	34.6	34.6		
Incr Delay (d2), s/veh	94.8	15.5	24.1	6.2	13.0	22.2	33.3	40.7	40.0	432.5	30.8	30.5		
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(95%),veh/ln	12.2	11.6	14.2	3.2	18.9	20.5	7.9	25.3	26.0	35.0	22.7	23.0		
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh	136.2	30.0	38.7	52.2	45.7	54.9	78.4	75.9	75.2	478.3	65.5	65.1		
LnGrp LOS	F	C	D	D	D	D	E	F	F	F	E	E		
Approach Vol, veh/h	1869				1549				1205		1310			
Approach Delay, s/veh	42.2				48.9				75.8		156.4			
Approach LOS	D				D				E		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	14.0	37.0	14.0	35.0	11.3	39.7	14.0	35.0						
Change Period (Y+Rc), s	* 5.4	5.1	* 5.5	* 5.4	* 5.4	5.1	* 5.5	* 5.4						
Max Green Setting (Gmax), s	* 8.6	31.9	* 8.5	* 30	* 8.6	31.9	* 8.5	* 30						
Max Q Clear Time (g_c+I1), s	10.6	29.9	9.1	30.0	5.7	30.9	10.5	31.6						
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	1.0	0.0	0.0						
Intersection Summary														
HCM 6th Ctrl Delay	76.0													
HCM 6th LOS	E													
Notes														





















HCM 6th Signalized Intersection Summary  
4: Hoover St & Olympic Blvd

Future With Project Conditions  
Weekday AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	1220	97	55	1193	183	87	1003	39	279	879	102
Future Volume (veh/h)	166	1220	97	55	1193	183	87	1003	39	279	879	102
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	180	1326	105	60	1297	199	95	1090	42	303	955	111
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	153	1680	133	101	1425	219	120	1033	40	151	1005	117
Arrive On Green	0.17	0.70	0.70	0.06	0.32	0.32	0.07	0.30	0.30	0.09	0.31	0.31
Sat Flow, veh/h	1781	4824	382	1781	4466	685	1781	3489	134	1781	3207	373
Grp Volume(v), veh/h	180	936	495	60	989	507	95	555	577	303	529	537
Grp Sat Flow(s),veh/h/ln	1781	1702	1802	1781	1702	1747	1781	1777	1846	1781	1777	1803
Q Serve(g_s), s	8.6	18.5	18.5	3.3	27.9	27.9	5.3	29.6	29.6	8.5	29.1	29.1
Cycle Q Clear(g_c), s	8.6	18.5	18.5	3.3	27.9	27.9	5.3	29.6	29.6	8.5	29.1	29.1
Prop In Lane	1.00		0.21	1.00		0.39	1.00		0.07	1.00		0.21
Lane Grp Cap(c), veh/h	153	1185	627	101	1086	557	120	526	546	151	557	565
V/C Ratio(X)	1.17	0.79	0.79	0.59	0.91	0.91	0.79	1.06	1.06	2.00	0.95	0.95
Avail Cap(c_a), veh/h	153	1185	627	153	1086	557	151	526	546	151	557	565
HCM Platoon Ratio	2.00	2.00	2.00	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	41.4	12.7	12.7	46.0	32.7	32.7	45.9	35.2	35.2	45.8	33.6	33.6
Incr Delay (d2), s/veh	127.5	5.4	9.8	5.4	12.8	21.4	19.4	54.7	54.0	473.2	27.5	27.3
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(95%),veh/ln	14.4	8.2	9.6	2.9	18.8	20.9	5.3	28.6	29.5	37.7	22.9	23.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	168.9	18.1	22.5	51.5	45.5	54.1	65.3	89.9	89.2	518.9	61.1	60.9
LnGrp LOS	F	B	C	D	D	D	E	F	F	F	E	E
Approach Vol, veh/h	1611			1556			1227			1369		
Approach Delay, s/veh	36.3			48.5			87.7			162.4		
Approach LOS	D			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	37.0	12.3	36.7	11.1	39.9	14.0	35.0				
Change Period (Y+Rc), s	* 5.4	5.1	* 5.5	* 5.4	* 5.4	5.1	* 5.5	* 5.4				
Max Green Setting (Gmax), s	* 8.6	31.9	* 8.5	* 30	* 8.6	31.9	* 8.5	* 30				
Max Q Clear Time (g_c+I1), s	10.6	29.9	7.3	31.1	5.3	20.5	10.5	31.6				
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	9.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	80.5											
HCM 6th LOS	F											
Notes												

HCM 6th Signalized Intersection Summary  
4: Hoover St & Olympic Blvd

Future With Project Conditions  
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	1497	77	62	1100	269	123	946	45	266	851	88
Future Volume (veh/h)	152	1497	77	62	1100	269	123	946	45	266	851	88
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	165	1627	84	67	1196	292	134	1028	49	289	925	96
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	153	1720	89	105	1306	319	151	1022	49	151	962	100
Arrive On Green	0.17	0.69	0.69	0.06	0.32	0.32	0.09	0.30	0.30	0.09	0.30	0.30
Sat Flow, veh/h	1781	4972	257	1781	4095	1000	1781	3453	165	1781	3249	337
Grp Volume(v), veh/h	165	1114	597	67	994	494	134	529	548	289	506	515
Grp Sat Flow(s),veh/h/ln	1781	1702	1824	1781	1702	1690	1781	1777	1841	1781	1777	1810
Q Serve(g_s), s	8.6	29.2	29.2	3.7	28.1	28.1	7.4	29.6	29.6	8.5	28.0	28.0
Cycle Q Clear(g_c), s	8.6	29.2	29.2	3.7	28.1	28.1	7.4	29.6	29.6	8.5	28.0	28.0
Prop In Lane	1.00		0.14	1.00		0.59	1.00		0.09	1.00		0.19
Lane Grp Cap(c), veh/h	153	1177	631	105	1086	539	151	526	545	151	526	536
V/C Ratio(X)	1.08	0.95	0.95	0.64	0.92	0.92	0.89	1.01	1.01	1.91	0.96	0.96
Avail Cap(c_a), veh/h	153	1177	631	153	1086	539	151	526	545	151	526	536
HCM Platoon Ratio	2.00	2.00	2.00	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	41.4	14.6	14.6	46.0	32.8	32.8	45.3	35.2	35.2	45.8	34.6	34.6
Incr Delay (d2), s/veh	94.8	16.1	24.9	6.2	13.3	22.7	41.6	40.7	40.0	432.5	30.8	30.5
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(95%),veh/ln	12.2	11.7	14.4	3.2	19.0	20.6	8.6	25.3	26.0	35.0	22.7	23.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	136.2	30.7	39.4	52.2	46.1	55.4	86.9	75.9	75.2	478.3	65.5	65.1
LnGrp LOS	F	C	D	D	D	E	F	F	F	F	E	E
Approach Vol, veh/h	1876			1555			1211			1310		
Approach Delay, s/veh	42.7			49.3			76.8			156.4		
Approach LOS	D			D			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	37.0	14.0	35.0	11.3	39.7	14.0	35.0				
Change Period (Y+Rc), s	* 5.4	5.1	* 5.5	* 5.4	* 5.4	5.1	* 5.5	* 5.4				
Max Green Setting (Gmax), s	* 8.6	31.9	* 8.5	* 30	* 8.6	31.9	* 8.5	* 30				
Max Q Clear Time (g_c+I1), s	10.6	30.1	9.4	30.0	5.7	31.2	10.5	31.6				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	0.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	76.4											
HCM 6th LOS	E											
Notes												





# TREE REPORT

## **PREPARED FOR**

Sagar Reddy

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## **PROPERTY**

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August 27, 2021

## **PREPARED BY**

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# TREE REPORT

957-967 S Arapahoe St.  
Los Angeles, CA 90006

## SUMMARY

PROJECT OVERVIEW	
Site Address	957-967 S Arapahoe St., Los Angeles, CA 90006
Location and/or Specific Plan	MacArthur Park
Project Description	Multi-family housing
Number of Protected Trees on Site	0
Number of Recommended Removals	0

This Tree Report was prepared at the request of the property owner, Sagar Reddy, who is preparing to build a multi-family housing on this property. The subject three lots are located in the MacArthur Park area of Los Angeles. They are currently developed with single family residences which the owner is preparing to demolish.

## PROTECTED TREES, URBAN FORESTRY DIVISION

This property is under the jurisdiction of the City of Los Angeles and guided by the Native Tree Protection Ordinance No. 186873. **Protected Trees** are defined by this ordinance as oaks (*Quercus* sp) indigenous to California but excluding the scrub oak (*Quercus dumosa*); Southern California black walnut (*Juglans californica* var. *californica*); Western sycamore (*Platanus racemosa*) and California bay laurel (*Umbellularia californica*) trees with a diameter at breast height (DBH) of four inches (4") or greater. **Protected Shrubs** are defined as Mexican elderberry (*Sambucus mexicana*); Toyon (*Heteromeles arbutifolia*) which measure four inches or more in cumulative diameter, four and one-half feet above the ground level at the base of the shrub.

There are NO trees or shrubs on this property that would be considered protected native within the City of Los Angeles Native Tree Protection Ordinance.

## NEIGHBOR TREES

I have also inspected the neighboring properties to confirm there are no protected tree or shrub species that are adjacent to the construction zone, or in areas of impact.

## CITY OF LOS ANGELES STREET TREES, URBAN FORESTRY DIVISION

At this time, I observed six (6) **Los Angeles street trees** in the parkway perimeter of the property. These trees will be retained.

## NON-PROTECTED SIGNIFICANT TREES, DEPARTMENT OF CITY PLANNING

The Department of City Planning requires the identification of the location, size, type and condition of all existing trees on the site with a DBH of 8 inches (8”) or greater. These trees will be identified as **Non-Protected Significant Trees**.

At this time, I observed five (5) **Non-Protected Significant Trees** on the property. These trees will be impacted by construction and are recommended for removal and replacement to the satisfaction of the City of Los Angeles Department of City Planning.

## ASSIGNMENT

The Assignment included:

- Field Observation and Inventory of Trees on Site
- Recommendations for the protection of trees to remain
- Photographs of the subject trees are included in Appendix B
- Matrix of proposed protected tree removals and protected trees to remain if applicable
- Evaluation of potential construction impacts
- A Tree Location Plot Map is included in Appendix A
- Protected tree construction impact guidelines

## LIMITS OF THE ASSIGNMENT

The field inspection was a visual, grade level tree assessment. No special tools or equipment were used. No tree risk assessments were performed. My site examination and the information in this report is limited to the date and time the inspection occurred. The information in this report is limited to the condition of the trees at the time of my inspection.

## TREE CHARACTERISTICS AND SITE CONDITIONS

Detailed information with respect to size, condition, species and recommendations are included in the Summary of Field Inspections in Appendix C. The trees are numbered on the Tree Location Map in Appendix A.

## IMPACT ANALYSIS AND SPECIFIC RECOMMENDATIONS

### **STREET TREES**

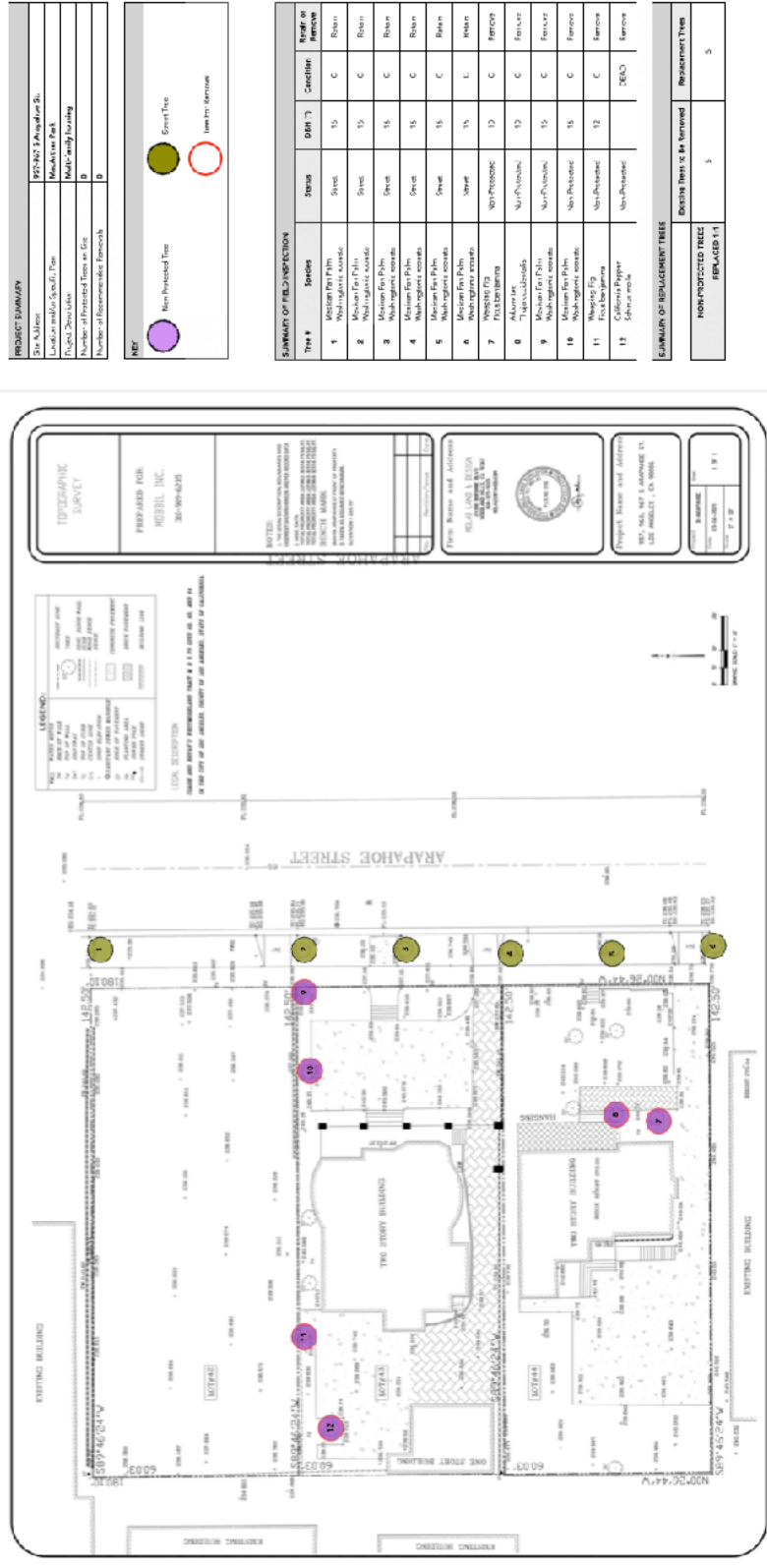
Six (6) Mexican Fan Palm (*Washingtonia robusta*) street trees will be retained. The proposed new driveway will have no impact on the street trees.

### **NON-PROTECTED TREES**

Five (5) non-protected significant trees will be impacted by the proposed construction and will be removed and replaced at a one-to-one (1:1) ratio, to the satisfaction of the City of Los Angeles Department of City Planning. There is one California pepper tree #12 listed on the map and inventory that is dead and will not require replacement.

# APPENDIX A.1 - TREE LOCATION - SURVEY MAP, REDUCED

Appendix A.1: Tree Locations on Project Survey



# APPENDIX A.2 - TREE LOCATION MAP, SITE PLAN REDUCED

Appendix A.2: Tree Locations on Project Site Plan

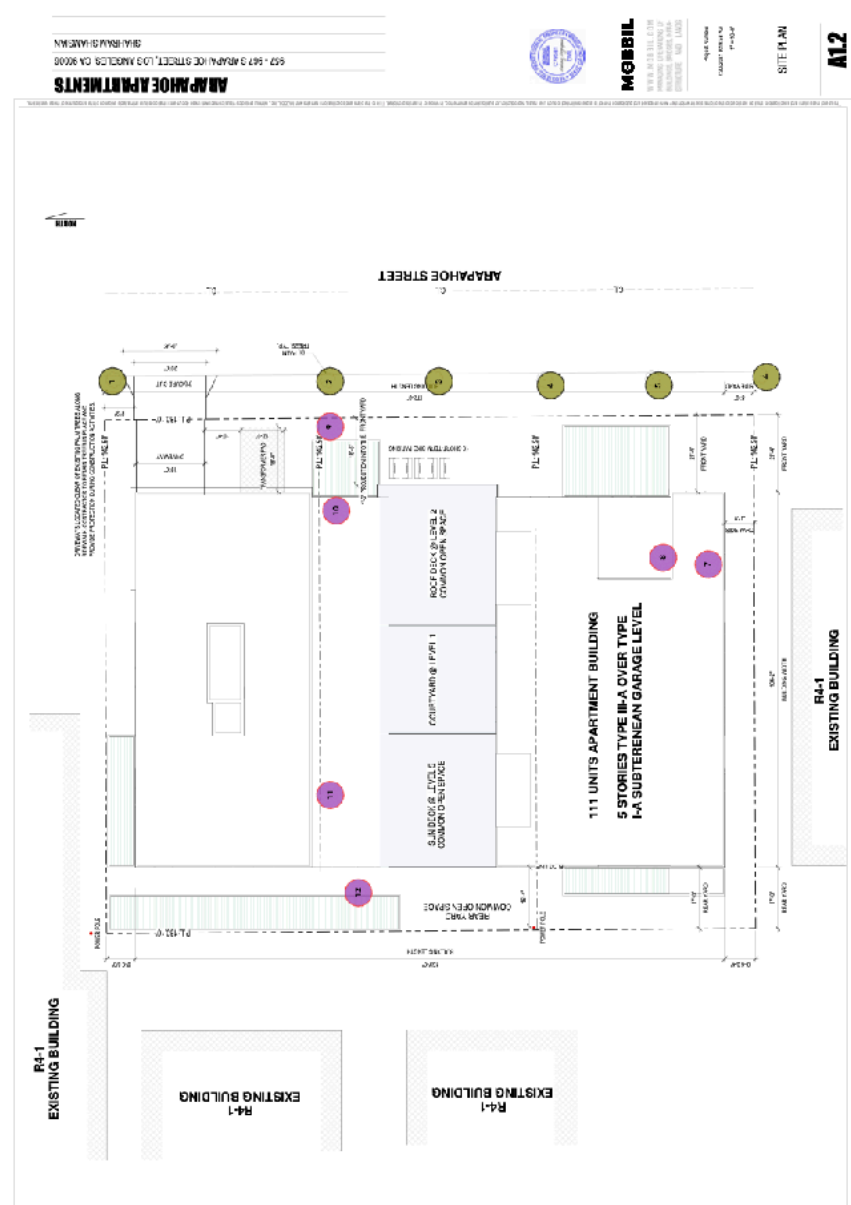
PROJECT SUMMARY			
720 - 611 Ave.	957-967 S Arapahoe St.	Maplewood Park	Maplewood Park
Location of Project	Maplewood Park	Maplewood Park	Maplewood Park
Project Description	Maplewood Park	Maplewood Park	Maplewood Park
Number of Proposed Units	111	Maplewood Park	Maplewood Park
Map Scale	1" = 100'	Maplewood Park	Maplewood Park

KEY			
	Non-Proposed Tree		Tree To Be Removed
	Tree To Be Removed		Tree To Be Removed

SUMMARY OF FIELD INSPECTION				
Tree #	Species	Status	DBH (")	Comments
1	Mountain Ash	Good	10"	Remove
2	Mountain Ash	Good	10"	Remove
3	Mountain Ash	Good	10"	Remove
4	Mountain Ash	Good	10"	Remove
5	Mountain Ash	Good	10"	Remove
6	Mountain Ash	Good	10"	Remove
7	Mountain Ash	Good	10"	Remove
8	Mountain Ash	Good	10"	Remove
9	Mountain Ash	Good	10"	Remove
10	Mountain Ash	Good	10"	Remove
11	Mountain Ash	Good	10"	Remove
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95	Mountain Ash	Good	10"	Remove
96	Mountain Ash	Good	10"	Remove
97	Mountain Ash	Good	10"	Remove
98	Mountain Ash	Good	10"	Remove
99	Mountain Ash	Good	10"	Remove
100	Mountain Ash	Good	10"	Remove





## APPENDIX B - PHOTOGRAPHS



**PHOTO 1** - Shows the Mexican Fan Palm street trees. These trees will be retained.



## APPENDIX B - PHOTOGRAPHS



**PHOTO 2** - Shows the Mexican Fan Palm street trees. These trees will be retained.

957-967 S Arapahoe St.



## APPENDIX B - PHOTOGRAPHS



**PHOTO 3** - Shows non-protected Mexican Fan Palm trees. These trees will be impacted and removed.



## APPENDIX B - PHOTOGRAPHS



**PHOTO 4** - Shows non-protected pepper tree #12. This tree is dead and will be removed.



## APPENDIX B - PHOTOGRAPHS



**PHOTO 5** - Shows non-protected Ficus tree. This tree will be impacted and removed.

## APPENDIX C - SUMMARY OF FIELD INSPECTION

Rating Code: A = Excellent, B = Good, C = Fair, D = Poor, E = Nearly Dead, F = Dead

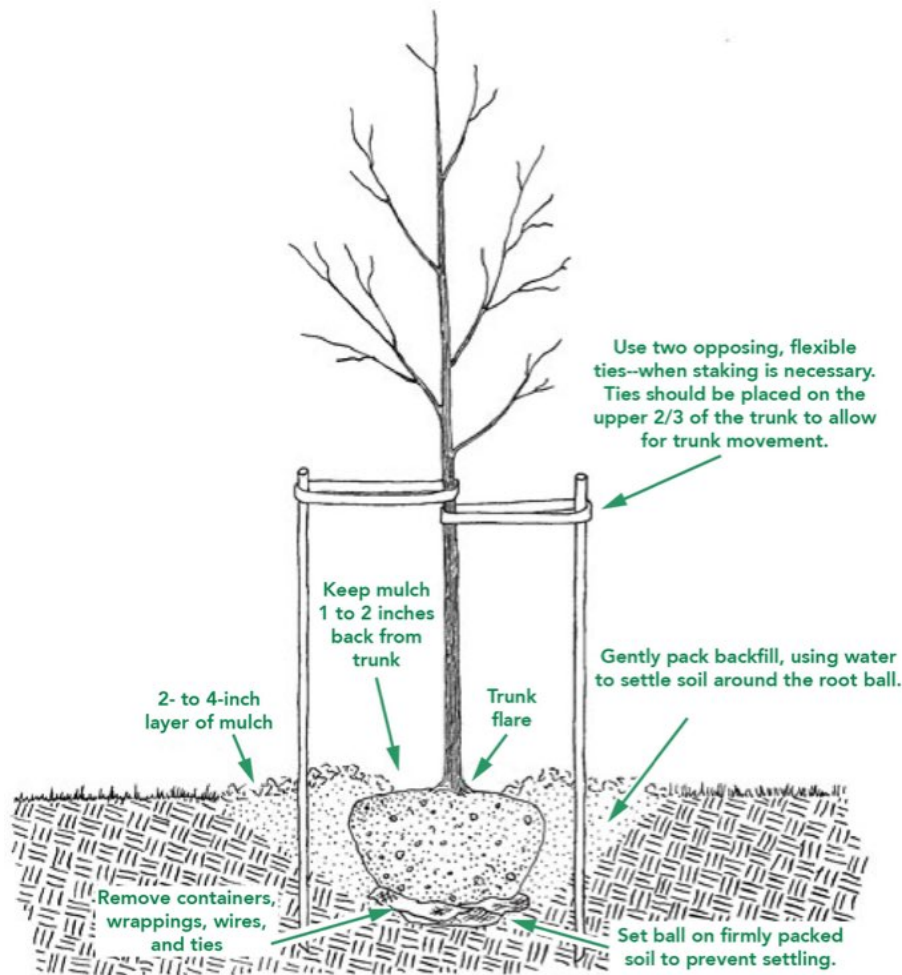
Tree #	Species	Status	DBH (")	Height (')	Spread (')	Summary of Condition	Retain or Remove
1	Mexican Fan Palm <i>Washingtonia robusta</i>	Street	16	90	10	C	Retain
2	Mexican Fan Palm <i>Washingtonia robusta</i>	Street	16	90	10	C	Retain
3	Mexican Fan Palm <i>Washingtonia robusta</i>	Street	16	90	10	C	Retain
4	Mexican Fan Palm <i>Washingtonia robusta</i>	Street	16	90	10	C	Retain
5	Mexican Fan Palm <i>Washingtonia robusta</i>	Street	16	90	10	C	Retain
6	Mexican Fan Palm <i>Washingtonia robusta</i>	Street	16	90	10	C	Retain
7	Weeping Fig <i>Ficus benjamina</i>	Non-Protected	10	25	12	C	Remove
8	Arborvitae <i>Thuja occidentalis</i>	Non-Protected	10	10	10	C	Remove
9	Mexican Fan Palm <i>Washingtonia robusta</i>	Non-Protected	16	20	10	C	Remove
10	Mexican Fan Palm <i>Washingtonia robusta</i>	Non-Protected	16	40	10	C	Remove
11	Weeping Fig <i>Ficus benjamina</i>	Non-Protected	12	35	25	C	Remove
12	California Pepper <i>Schinus molle</i>	Non-Protected		30	20	F	Remove

## APPENDIX D - SUMMARY OF DATA

**Table 2. Schedule of Proposed Removals**

					RECOMMENDATION
Tree #	Species	Status	Condition	Retain or Remove	Reason for Removal
7	Weeping Fig <i>Ficus benjamina</i>	Non-Protected	Fair	Remove	Grading, Soil removal and recompaction
8	Arborvitae <i>Thuja occidentalis</i>	Non-Protected	Fair	Remove	Grading, Soil removal and recompaction
9	Mexican Fan Palm <i>Washingtonia robusta</i>	Non-Protected	Fair	Remove	Grading, Soil removal and recompaction
10	Mexican Fan Palm <i>Washingtonia robusta</i>	Non-Protected	Fair	Remove	Grading, Soil removal and recompaction
11	Weeping Fig <i>Ficus benjamina</i>	Non-Protected	Fair	Remove	Grading, Soil removal and recompaction

## NEW TREE PLANTING



The ideal time to plant trees and shrubs is during the dormant season, in the fall after leaf drop or early spring before budbreak. Weather conditions are cool and allow plants to establish roots in the new location before spring rains and summer heat stimulate new top growth. Before you begin planting your tree, be sure you have had all underground utilities located prior to digging.

If the tree you are planting is balled or bare root, it is important to understand that its root system has been reduced by 90 to 95 percent of its original size during transplanting. As a result of the trauma caused by the digging process, trees commonly exhibit what is known as transplant shock. Containerized trees may also experience transplant shock, particularly if they have circling roots that must be cut. Transplant shock is indicated by slow growth and reduced vigor following transplanting. Proper site preparation before and during planting coupled with good follow-up care reduces the amount of time the plant experiences transplant shock and allows the tree to quickly establish in its new location. Carefully follow nine simple steps, and you can significantly reduce the stress placed on the plant at the time of planting.



## NEW TREE PLANTING, continued

- 1. Dig a shallow, broad planting hole.** Make the hole wide, as much as three times the diameter of the root ball but only as deep as the root ball. It is important to make the hole wide because the roots on the newly establishing tree must push through surrounding soil in order to establish. On most planting sites in new developments, the existing soils have been compacted and are unsuitable for healthy root growth. Breaking up the soil in a large area around the tree provides the newly emerging roots room to expand into loose soil to hasten establishment.
- 2. Identify the trunk flare.** The trunk flare is where the roots spread at the base of the tree. This point should be partially visible after the tree has been planted (see diagram). If the trunk flare is not partially visible, you may have to remove some soil from the top of the root ball. Find it so you can determine how deep the hole needs for proper planting.
- 3. Remove tree container for containerized trees.** Carefully cutting down the sides of the container may make this easier. Inspect the root ball for circling roots and cut or remove them. Expose the trunk flare, if necessary.
- 4. Place the tree at the proper height.** Before placing the tree in the hole, check to see that the hole has been dug to the proper depth and no more. The majority of the roots on the newly planted tree will develop in the top 12 inches of soil. If the tree is planted too deeply, new roots will have difficulty developing because of a lack of oxygen. It is better to plant the tree a little high, 1-2 inches above the base of the trunk flare, than to plant it at or below the original growing level. This planting level will allow for some settling.
- 5. Straighten the tree in the hole.** Before you begin backfilling, have someone view the tree from several directions to confirm that the tree is straight. Once you begin backfilling, it is difficult to reposition the tree.
- 6. Fill the hole gently but firmly.** Fill the hole about one-third full and gently but firmly pack the soil around the base of the root ball. Be careful not to damage the trunk or roots in the process. Fill the remainder of the hole, taking care to firmly pack soil to eliminate air pockets that may cause roots to dry out. To avoid this problem, add the soil a few inches at a time and settle with water. Continue this process until the hole is filled and the tree is firmly planted. It is not recommended to apply fertilizer at time of planting.
- 7. Stake the tree, if necessary.** If the tree is grown properly at the nursery, staking for support will not be necessary in most home landscape situations. Studies have shown that trees establish more quickly and develop stronger trunk and root systems if they are not staked at the time of planting. However, protective staking may be required on sites where lawn mower damage, vandalism, or windy conditions are concerns. If staking is necessary for support, there are three methods to choose among: staking, guying, and ball stabilizing. One of the most common methods is staking. With this method, two stakes used in conjunction with a wide, flexible tie material on the lower half of the tree will hold the tree upright, provide flexibility, and minimize injury to the trunk (see diagram). Remove support staking and ties after the first year of growth.
- 8. Mulch the base of the tree.** Mulch is simply organic matter applied to the area at the base of the tree. It acts as a blanket to hold moisture, it moderates soil temperature extremes, and it reduces competition from grass and weeds. A 2- to 3-inch layer is ideal. More than 3 inches may cause a problem with oxygen and moisture levels. When placing mulch, be sure that the actual trunk of the tree is not covered. Doing so may cause decay of the living bark at the base of the tree. A mulch-free area, 1 to 2 inches wide at the base of the tree, is sufficient to avoid moist bark conditions and prevent decay.

## TREE MAINTENANCE AND PRUNING

Some trees do not generally require pruning. The occasional removal of dead twigs or wood is typical. Occasionally a tree has a defect or structural condition that would benefit from pruning. Any pruning activity should be performed under the guidance of a certified arborist or tree expert.

Because each cut has the potential to change the growth of the tree, no branch should be removed without a reason. Common reasons for pruning are to remove dead branches, to remove crowded or rubbing limbs, and to eliminate hazards. Trees may also be pruned to increase light and air penetration to the inside of the tree's crown or to the landscape below. In most cases, mature trees are pruned as a corrective or preventive measure.

Routine thinning does not necessarily improve the health of a tree. Trees produce a dense crown of leaves to manufacture the sugar used as energy for growth and development. Removal of foliage through pruning can reduce growth and stored energy reserves. Heavy pruning can be a significant health stress for the tree.

Yet if people and trees are to coexist in an urban or suburban environment, then we sometimes have to modify the trees. City environments do not mimic natural forest conditions. Safety is a major concern. Also, we want trees to complement other landscape plantings and lawns. Proper pruning, with an understanding of tree biology, can maintain good tree health and structure while enhancing the aesthetic and economic values of our landscapes.

### Pruning Techniques – From the I.S.A. Guideline

Specific types of pruning may be necessary to maintain a mature tree in a healthy, safe, and attractive condition.

**Cleaning** is the removal of dead, dying, diseased, crowded, weakly attached, and low- vigor branches from the crown of a tree.

**Thinning** is the selective removal of branches to increase light penetration and air movement through the crown. Thinning opens the foliage of a tree, reduces weight on heavy limbs, and helps retain the tree's natural shape.

**Raising** removes the lower branches from a tree to provide clearance for buildings, vehicles, pedestrians, and vistas.

**Reduction** reduces the size of a tree, often for clearance for utility lines. Reducing the height or spread of a tree is best accomplished by pruning back the leaders and branch terminals to lateral branches that are large enough to assume the terminal roles (at least one-third the diameter of the cut stem). Compared to topping, reduction helps maintain the form and structural integrity of the tree.

## **TREE MAINTENANCE AND PRUNING, continued**

### **How Much Should Be Pruned?**

Mature trees should require little routine pruning. A widely accepted rule of thumb is never to remove more than one-quarter of a tree's leaf-bearing crown. In a mature tree, pruning even that much could have negative effects. Removing even a single, large- diameter limb can create a wound that the tree may not be able to close. The older and larger a tree becomes, the less energy it has in reserve to close wounds and defend against decay or insect attack. Pruning of mature trees is usually limited to removal of dead or potentially hazardous limbs.

### **Wound Dressings**

Wound dressings were once thought to accelerate wound closure, protect against insects and diseases, and reduce decay. However, research has shown that dressings do not reduce decay or speed closure and rarely prevent insect or disease infestations. Most experts recommend that wound dressings not be used.

## **DISEASES AND INSECTS**

Continual observation and monitoring of your tree can alert you to any abnormal changes. Some indicators are: excessive leaf drop, leaf discoloration, sap oozing from the trunk and bark with unusual cracks. Should you observe any changes, you should contact a Tree specialist or Certified Arborist to review the tree and provide specific recommendations. Trees are susceptible to hundreds of pests, many of which are typical and may not cause enough harm to warrant the use of chemicals. However, diseases and insects may be indication of further stress that should be identified by a professional.

## **GRADE CHANGES**

The growing conditions and soil level of trees are subject to detrimental stress should they be changed during the course of construction. Raising the grade at the base of a tree trunk can have long-term negative consequences. This grade level should be maintained throughout the protected zone. This will also help in maintaining the drainage in which the tree has become accustomed.

## **INSPECTION**

The property owner should establish an inspection calendar based on the recommendation provided by the tree specialist. This calendar of inspections can be determined based on several factors: the maturity of the tree, location of tree in proximity to high-use areas vs. low-use area, history of the tree, prior failures, external factors (such as construction activity) and the perceived value of the tree to the homeowner.

## Assumptions and Limiting Conditions

No warranty is made, expressed or implied, that problems or deficiencies of the trees or the property will not occur in the future, from any cause. The Consultant shall not be responsible for damages or injuries caused by any tree defects, and assumes no responsibility for the correction of defects or tree related problems.

The owner of the trees may choose to accept or disregard the recommendations of the Consultant, or seek additional advice to determine if a tree meets the owner's risk abatement standards.

The Consulting Arborist has no past, present or future interest in the removal or retaining of any tree. Opinions contained herein are the independent and objective judgments of the consultant relating to circumstances and observations made on the subject site.

The recommendations contained in this report are the opinions of the Consulting Arborist at the time of inspection. These opinions are based on the knowledge, experience, and education of the Consultant. The field inspection was a visual, grade level tree assessment.

The Consulting Arborist shall not be required to give testimony, perform site monitoring, provide further documentation, be deposed, or to attend any meeting without subsequent contractual arrangements for this additional employment, including payment of additional fees for such services as described by the Consultant.

The Consultant assumes no responsibility for verification of ownership or locations of property lines, or for results of any actions or recommendations based on inaccurate information.

This Arborist report may not be reproduced without the express permission of the Consulting Arborist and the client to whom the report was issued. Any change or alteration to this report invalidates the entire report.

Should you have any further questions regarding this property, please contact me at (310) 663-2290.

Respectfully submitted,



**Lisa Smith**

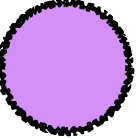
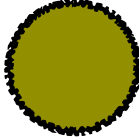
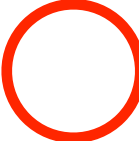
Registered Consulting Arborist #464  
ISA Board Certified Master Arborist #WE3782B  
ISA Tree Risk Assessor Qualified- Instructor  
American Society of Consulting Arborists, Member





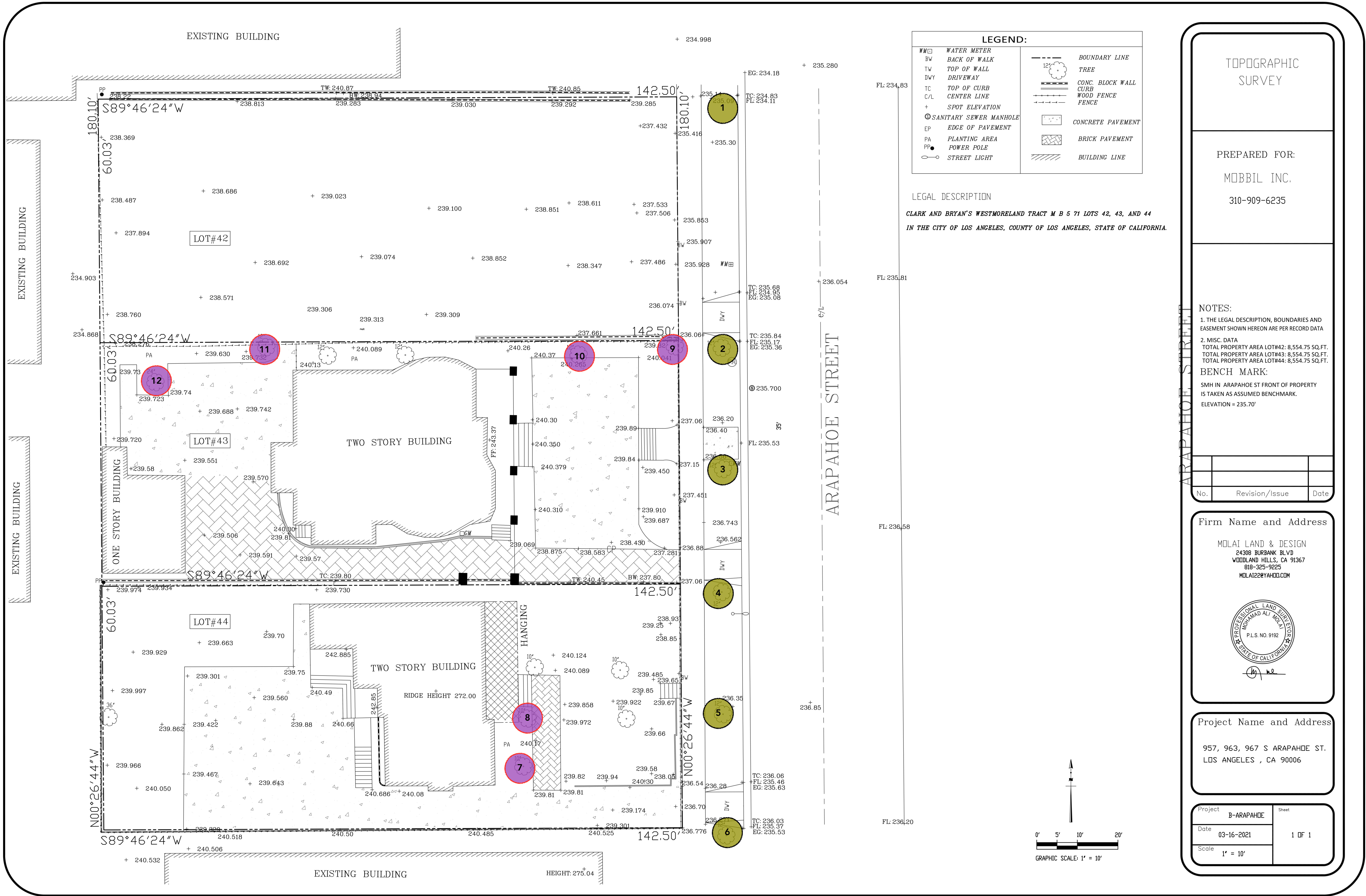
Appendix A.1: Tree Locations on Project Survey

PROJECT SUMMARY	
Site Address	957-967 S Arapahoe St.
Location and/or Specific Plan	MacArthur Park
Project Description	Multi-family housing
Number of Protected Trees on Site	0
Number of Recommended Removals	0

KEY	
 Non-Protected Tree	 Street Tree
	 Tree For Removal

SUMMARY OF FIELD INSPECTION					
Tree #	Species	Status	DBH (")	Condition	Retain or Remove
1	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
2	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
3	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
4	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
5	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
6	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
7	Weeping Fig Ficus benjamina	Non-Protected	10	C	Remove
8	Arborvitae Thuja occidentalis	Non-Protected	10	C	Remove
9	Mexican Fan Palm Washingtonia robusta	Non-Protected	16	C	Remove
10	Mexican Fan Palm Washingtonia robusta	Non-Protected	16	C	Remove
11	Weeping Fig Ficus benjamina	Non-Protected	12	C	Remove
12	California Pepper Schinus molle	Non-Protected		DEAD	Remove

SUMMARY OF REPLACEMENT TREES		
	Existing Trees to Be Removed	Replacement Trees
NON-PROTECTED TREES REPLACED 1:1	5	5








## Appendix A.2: Tree Locations on Project Site Plan

PROJECT SUMMARY	
Site Address	957-967 S Arapahoe St.
Location and/or Specific Plan	MacArthur Park
Project Description	Multi-family housing
Number of Protected Trees on Site	0
Number of Recommended Removals	0

**KEY**

 Non-Protected Tree
  Street Tree

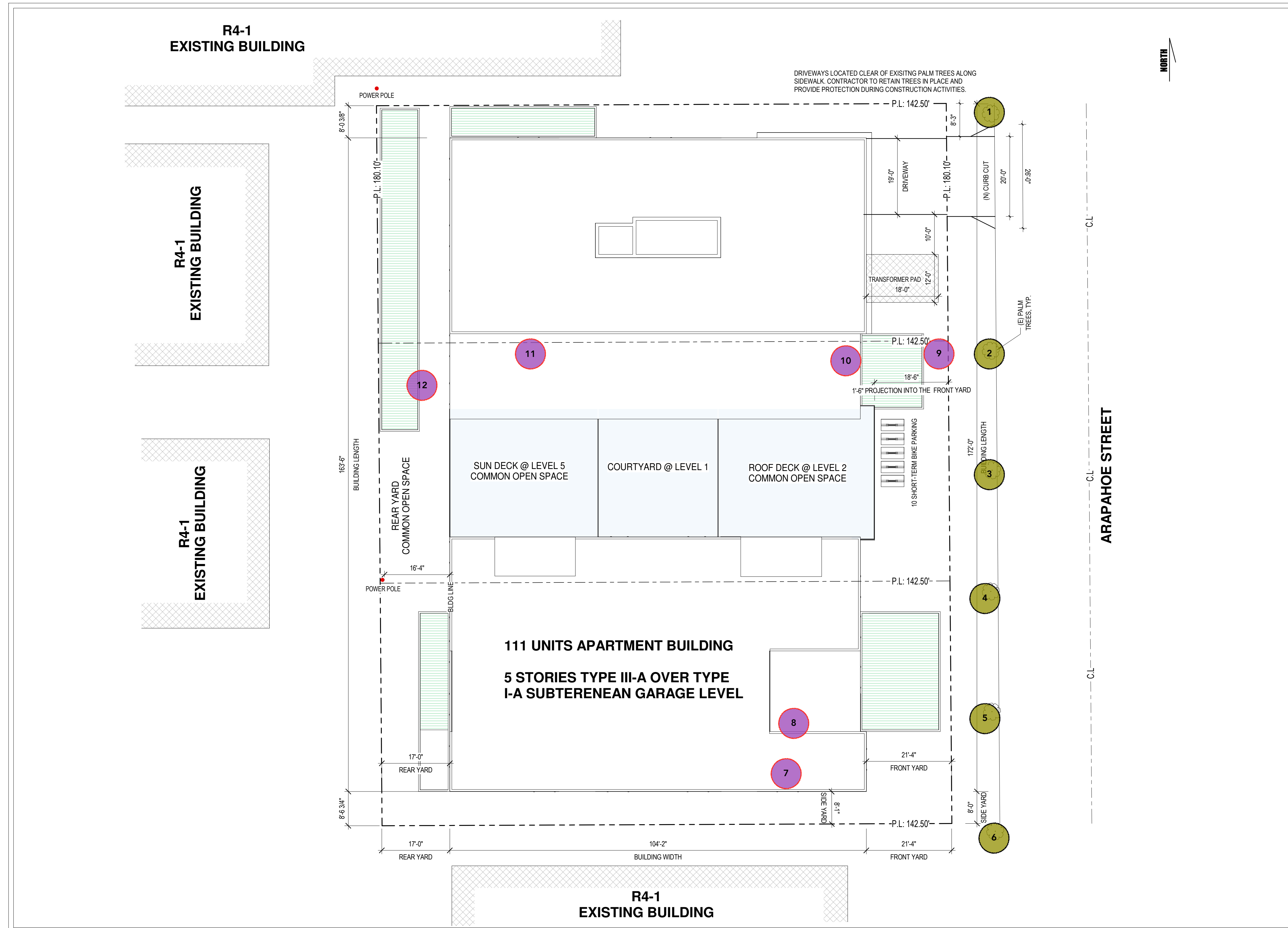
 Tree For Removal

## SUMMARY OF FIELD INSPECTION

Tree #	Species	Status	DBH (")	Condition	Retain or Remove
1	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
2	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
3	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
4	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
5	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
6	Mexican Fan Palm Washingtonia robusta	Street	16	C	Retain
7	Weeping Fig Ficus benjamina	Non-Protected	10	C	Remove
8	Arbovitae Thuja occidentalis	Non-Protected	10	C	Remove
9	Mexican Fan Palm Washingtonia robusta	Non-Protected	16	C	Remove
10	Mexican Fan Palm Washingtonia robusta	Non-Protected	16	C	Remove
11	Weeping Fig Ficus benjamina	Non-Protected	12	C	Remove
12	California Pepper Schinus molle	Non-Protected		DEAD	Remove

## SUMMARY OF REPLACEMENT TREES

	Existing Trees to Be Removed	Replacement Trees
NON-PROTECTED TREES REPLACED 1:1	5	5



**ARAPAHOE APARTMENTS**

957 - 967 S ARAPAHOE STREET, LOS ANGELES, CA 90006  
SHAHRAM SHAMSIAN



MOBIL

WWW.MOBIL.COM  
MANAGING OPERATIONS OF  
BUILDINGS, BRIDGES, INFRA-  
STRUCTURE AND LANDS

Project Number  
7/30/2021 9:19:53 AM  
1" = 10'-0"

## SITE PLAN

## A1.2