APPENDIX C

RESUMES / CONTRACT / REFERENCES

Ayesha S. Syeda

Title: **Manager of GeoServices**

Summary of Qualifications: Experienced in conducting and managing Phase I/Phase II Environmental Assessments, Soil Vapor Surveys, and site characterizations in California, Arizona, mid-west states, and Washington. Other experience includes overseeing and supervising work activities at commercial and industrial facilities including sampling of groundwater monitoring wells, oversight and sampling of underground storage tank (UST) removals and abandonment's, drilling of soil borings and collection of soil samples for laboratory analysis, excavation and transportation of hazardous and non-hazardous soils.

Academic Background:

M.S. Environmental Engineering, Cal. State Univ. Long Beach (1993)
B.S. Civil Engineering, Osmania University, India (1988)
Certificate -Industrial Hygiene Technician, Cal. State University, Long Beach
OSHA 29 CFR 1910.120 - 40 hour training.
AHERA Certified Building Inspector/ Certified Asbestos Contractor/Supervisor

Professional Experience:

March 2007 to present: Manager of GeoServices
Smith-Emery GeoServices - Los Angeles, California
Manage personnel associated with Smith-Emery Los Angeles County's office's Environmental/Geotechnical Departments and soils laboratory. Other responsibilities include review and sign off of final reports and documents.

December 1993 to March 2007: Engineer/Phase I Manager
Smith-Emery GeoServices - Los Angeles, California
Responsible for field research and analysis of Phase I Environmental Assessments, report preparation, and project supervision. Assists with Phase II Assessment fieldwork and report preparation.

June 1993 - September 1993: Environmental Engineer
BCM Engineers- Ontario, California
Project manager for Phase I and Phase II Environmental Assessments, asbestos sampling, and supervising abatement.

June 1992-March 1993: Engineer
Epics International Engineers-Long Beach, California
Duties included Phase I Site Assessments, including research for federal and state requirements. Performed building inspections for asbestos potential.

October 1991 to May 1992: Volunteer Student Intern
Public Works Department-San Bernardino County, California
Assisted civil engineers in their duties, including surveying and drafting, research and collecting data for specialized engineering functions. Reviewing geologic and hydrologic information and estimating for quantities of materials.

SMITH-EMERY GEOSERVICES

May 19, 2020 Proposal No. LA-8430R

James Suhr & Associates LLC
817 Chautauqua Boulevard
Pacific Palisades, CA 90272

Attn: Mr. Jim Suhr

Proposal: Phase I Environmental Site Assessment
905 Beacon Avenue, Los Angeles, CA 90015

INTRODUCTION

In accordance with your request, Smith-Emery GeoServices is pleased to present this proposal for a Phase I Environmental Site Assessment at the above mentioned address. The purpose of the study will be to assess the site with regard to potential onsite and/or offsite sources of contamination. A report will be prepared which will include our findings, conclusions and recommendations. The Phase I Report will be in conformance with the scope and limitations of the ASTM E 1527-13 Standard which is AAI compliant.

SCOPE OF SERVICES

Our scope of services will include the following:

Site Reconnaissance:

A reconnaissance of the subject property will be conducted to attempt to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property. Items such as current and past uses of the property and adjoining properties; property boundaries; structures or other improvements; roads; source and location of potable water; wells; surface water; potential hazardous substances and/or petroleum products; storage tanks; abnormal odors; pools of liquid; drums and containers; suspected fill materials; stained soil or pavement; stressed vegetation; solid waste; waste water discharges; floor drains, sumps or clarifiers; septic systems shall be noted as reasonably and visibly observed. The adjacent sites will be viewed from publicly accessible roads to attempt to determine land usage and/or any potential concerns. A site schematic referencing the subject site and photographs showing current site conditions will be included in the report.

Site Interviews:

SEG will make a reasonable attempt to interview the current owner, tenant(s), and key site manager per the ASTM standard.

791 EAST WASHINGTON BOULEVARD
LOS ANGELES, CALIFORNIA 90021
PHONE 213/699-7812
FAX 213/741-8621

1195 NORTH TUSTIN AVENUE
ANAHEIM, CALIFORNIA 92807
PHONE 714/238-6133
FAX 714/238-6144

Historic Site and Surrounding Land Use:

A review of the following reasonably available information sources will be performed to attempt to determine previous site usage and historic surrounding land use back to its first development. Current and historical site addresses identified during the course of our research will be researched as practically reviewable under the ASTM standard and time provided by the client.

- Aerial Photographs
- Building Permits
- Historical City Directories
- Historical Directory Listings
- Sanborn Fire Insurance Maps
- U.S. Geological Survey (Topographic Map)

A reasonable attempt will be made to interview past owners and tenants of the subject site in order to determine historical negative environmental conditions, if they can be identified and can provide new information as per the ASTM standard.

Evaluation of Site Hydrogeology:

A summary and discussion of the reasonably ascertainable published information on site geology, groundwater occurrence, and direction of regional groundwater flow will be included. The potential impact of regional groundwater contamination problems will be discussed if applicable.

Regulatory List Review:

Search of local, state, tribal and federal databases in accordance with current ASTM and All Appropriate Inquiries (AAI) standard search distances. – (source-EDR Radius report).

Hazardous Materials Search:

The appropriate local and/or state agencies will be contacted to obtain reasonably ascertainable information regarding hazardous materials usage, underground storage tanks, emergency release response reports, contaminated sites. A street address is typically required to review files at the agencies. SEG will contact local and state agencies, such as environmental health departments, fire prevention bureaus, and building and planning departments to identify any current or previous reports of hazardous materials use, storage, and/or unauthorized releases that may have impacted the subject property.

Oil & Gas Map Review:

Applicable and reasonably ascertainable Division of Oil, Gas & Geothermal Resources Oil and Gas maps will be reviewed to attempt to assess potential concerns due to historic or current oil and/or gas wells on or in the vicinity of the site.

Review of Additional Documentation

SEG will conduct a review of previous environmental and geotechnical reports, regulatory permits, tenant lists, and site plans pertaining to the subject property as provided by the client in a timely manner.

Report Preparation

SEG will prepare draft and final assessment reports for each complex site. The report will include all ASTM required sections including but not limited to: executive summary/summary conclusions, site history/setting, regional geology, hazardous materials section, regulatory database records research, vapor encroachment condition section, a general opinion as to the non-scope items of additional risks including asbestos, lead, PCBs, petroleum exploration (oil well drilling), mold, and radon gas will be included in the report. Attachments to the report will included all site research documentation/regulatory database report and site illustrations (vicinity/site schematic/subjects site diagram) / captioned site photographs. One (1) electronic copy will be submitted for all Phase I reports.

Additional Documents requested to be provided by the Client

SEG requests the following site information be provided (if available) to facilitate research:

- Plot plan or facility design drawing;
- Previous environmental or geotechnical studies;
- Current title report including environmental liens and AULs;
- List of past and present owners and tenants, and contact information, if available;
- Name and number of site personnel or contact available for site walk-through of the facility
- Any environmental or regulatory permits.

Not included in the scope of this proposal for the subject site are: subsurface investigation, chemical analysis of soil, groundwater, air, asbestos, or lead-based paint, testing for radon or methane gas or for mold, mildew or other biohazards, handling and/or disposal of hazardous materials, and any responses to agency comments or inaccuracies.

“No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost.” ASTM E 1527-13.

FEE

The fee for this project is **$** and we will not exceed this figure without your notification. A signed faxed copy of the attached Terms and Conditions will initiate the work. **The rates quoted in this proposal are valid for 7 days.** The estimated cost breakdown is as follows:

Phase I Assessment	**=$**	

Optional Extra Items (If Requested)

RUSH Turnaround fees (includes overnight delivery fee)	= $	350.00
Overnight report delivery fee	= $	35.00
Environmental Lien and AUL Research	= $	Site Specific
Paper Copy of Report	= $	75.00

Note: Please check the box(s) for optional extra items on the signature page (last page).

SCHEDULE

We are prepared to start research immediately upon receipt of a signed copy of our terms and conditions. Smith-Emery GeoServices will complete the report within 10-15 working days. This time frame is occasionally subject to constraints imposed by regulatory and public agencies on accessibility of information required to complete the report (some agencies require written requests for file review and have been known to take longer than 15 working days to respond). If this occurs we will provide verbal results after the file review has been granted. If a written report of the agency delayed file review is required, it will be provided as an addendum to the Phase I at additional cost. Rush reports are completed within 7-10 working days — in case a rush turnaround time is requested please check Rush option on the last page of this proposal.

We appreciate the opportunity to submit this proposal and look forward to working with you. If you have any questions regarding this proposal, please do not hesitate to contact us at 213-699-7812.

Respectfully submitted,
SMITH - EMERY GEOSERVICES

AYESHA SYEDA
Manager of GeoServices

BID QUALIFIERS

- Phase II recommendations may be included in the report if any Recognized Environmental Conditions are found unless requested in writing to not include Phase II recommendations prior to completion of the report.
- Assumes that the site has one address for each building not exceeding a total of three addresses.
- Any addendum(s) required in association with the Phase I report or consultations needed by the client, lending institutions, or agencies after the report has been issued will be charged to the client on time and materials basis.
- The client will provide all available information on the subject site(s) to SEG prior to initiating the fieldwork.
- Report will be prepared in standard Smith-Emery GeoServices format.
- Assumes no work is necessary outside SEG's scope of services as outlined in this proposal. If conditions indicate that a change in the scope of services is required, the client will be notified and a change order will be issued to the client for the approval of the associated cost.
- If the record research fee at agencies exceeds $100 per project, the additional fee will be billed directly to the client.
- The records researched may be limited by SEG pending the various regulatory agencies' policies and requirements, and may be limited to "reasonably ascertainable" and "practically reviewable" records as defined under the ASTM standard E1527-13.
- Report will be shipped via US mail unless overnight or rush charges are requested.
- No property addresses will be investigated as subject site other then those addresses specified by this proposal.

TERMS AND CONDITIONS:

The following Terms and Conditions are incorporated in full as part of this agreement. The client's signature at the end of this document is required for the work to proceed and indicates that the client is aware of the Risk Allocation Section of this document.

SECTION 1: THE AGREEMENT

1.1 Smith Emery GeoServices (hereinafter known as SEG) agrees to perform its services, which are intended solely for the use of the client, in a manner consistent with the current standards of professional practice in the community. Client agrees to pay for and to look to SEG for only such services as set forth in this work order and/or the attached proposal. Submittals to governmental agencies are the responsibility of the Client.

1.2 The agreement between the parties consists of these terms, the attached proposal, if any, and any exhibits or attachments noted in the proposal. Together these elements will constitute the entire agreement superseding any and all prior negotiations, correspondence, or agreements either written or oral. Any changes to this agreement must be mutually agreed to in writing.

1.3 If the Client is a corporation or public entity, the individuals who sign this agreement on behalf of the Client warrant that they are duly authorized agents of the Client and guarantee that the Client will perform its duties under this agreement. The client binds itself, its partners, successors, executors, administrators and assigns to this agreement in respect to all its terms and conditions.

SECTION 2: STANDARD OF CARE

2.1 The client recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or explorations are made, and that site conditions may change with time. Data interpretations and recommendations by SEG will be based solely on information available to SEG. SEG is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

2.2 Services performed by SEG under this agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions and in the same locality of the project. No warranty, expressed or implied, is made.

SECTION 3: SITE ACCESS AND SITE CONDITIONS

3.1 Client will grant or obtain free access to the site for all equipment and personnel necessary for SEG to perform the work set forth in this agreement. Client will grant or obtain permission for SEG personnel to photograph the site. The client will notify any and all possessors of the project site that client has granted SEG free access to the site. SEG will take reasonable precautions to minimize damage to the site, but it is understood by client that, in the normal course of work, some damage may occur and the correction of such damage is not part of this agreement unless so specified in the proposal.

3.2 The client is responsible for the accuracy of locations for all subterranean structures and utilities. SEG will take reasonable precautions to avoid known subterranean structures, and the client waives any claim against SEG, and agrees to defend, indemnify, and hold SEG harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, client agrees to compensate SEG for any time spent or expenses incurred by SEG in defense of any such claim with compensation to be based on SEG's prevailing fee schedule and expense reimbursement policy.

SECTION 4: COOPERATION AND PROJECT UNDERSTANDING

4.1 Client will make available to SEG all information regarding existing and proposed conditions of the site. The information shall include, but not be limited to plot plans, topographic surveys, hydrographic data and previous soil data including borings, field and laboratory tests, and written reports. Client will immediately transmit to SEG any new information which becomes available or any change in plans.

4.2 Client agrees to provide a representative at the job site to supervise and coordinate the job when required by SEG and upon 24 hours notice. SEG shall not be liable for any incorrect advice, judgment or decision based on any inaccurate information furnished by client, and client will indemnify SEG against claims, demands, or liability arising out of or contributed to by such information.

SECTION 5: SAMPLE DISPOSAL

5.1 SEG will dispose of all remaining soil, rock and materials samples at the time of report completion. Further storage or transfer of samples can be made at client's expense upon client's prior written request.

5.2 Contaminated drill cuttings, sample spoils, and wash water may be produced as a result of encountering hazardous materials at the site. Such materials will be properly contained, labeled, and stored on-site by SEG. It is the client's responsibility for the proper transportation and disposal of such hazardous materials. SEG can arrange for the transportation and disposal of hazardous materials at the client's request.

SECTION 6: CONSTRUCTION MONITORING

6.1 If SEG is retained by the client to provide a site representative for the purpose of monitoring specific portions of the construction work as set forth in the proposal, then this section applies. For the specified assignment, SEG will report observations and professional opinions to the client. No action of SEG or SEG's site representative can be construed as altering any agreement between the client and others. SEG will report any observed work to the client which, in SEG’s professional opinion, does not conform with plans and specification. SEG has no right to reject or stop work of any agent of the client. Such rights are reserved solely for the client. Furthermore SEG's presence on site does not in any way guarantee the completion or quality of the performance of the work of any party retained by the client to provide construction related services.

6.2 Neither the professional activities of SEG, nor the presence of SEG or its employees and subcontractors, shall be construed to imply that SEG has any responsibility for methods of work performances, supervision, sequencing of construction, or safety in, on , or about the job site. Client agrees that the General Contractor is solely responsible for job site safety, and warrants that this intent shall be made evident in the Owner's agreement with the General Contractor. This requirement shall be made to apply continuously and not be limited to normal working hours. Client also warrants that SEG shall be made an additional insured under the General Contractor's general liability insurance policy.

6.3 In the event that SEG expressly assumes health and safety responsibilities for toxic or other concerns specified, the acceptance of such responsibility does not and shall not be deemed an acceptance of responsibility for any other health and safety requirements, such as but not limited to those relating to excavating, trenching, drilling or backfilling.

SECTION 7: BILLING AND PAYMENT

7.1 Client will pay SEG the fee indicated in the proposal or, if no fee is indicated, in accordance with the schedule of personnel and equipment charges, as shown in the proposal and its attachments. Backup data on billing will not be available unless prior arrangements have been made. Prior to initiation of field work, a retainer as specified in the proposal, is required. Invoices for the balance will be submitted to client by SEG, and will be due and payable upon presentation. If client objects to all or any portion of any invoice, client will so notify SEG in writing within fourteen (14) calendar days of the invoice date, identify the cause of disagreement, and pay when due that portion of the invoice not in dispute. The parties will immediately make every effort to settle the disputed portion of the invoice. In the absence of written notification described above, the balance as stated on the invoice will be paid.

7.2 Invoices are delinquent if payment has not been received within thirty (30) days from date of invoice. Client will pay an additional charge of 1 1/2 (1.5) percent per month (or the maximum percentage allowed by law, whichever is lower) on any delinquent amount, excepting any portion of the invoiced amount in dispute and resolved in favor of client. Payment thereafter will first be applied to accrued interest and then to the principal unpaid amount. All time spent and expenses incurred (including any attorney's fees) in connection with collection of any delinquent amount will be paid by the client to SEG per SEG's current fee schedule. In the event client fails to pay SEG within sixty (60) days after invoices are rendered, client agrees that SEG will have the right to consider the failure to pay SEG's invoice as a breach of this agreement. (See Section 11, Termination.)

7.3 Fee schedules are periodically revised. Unless otherwise agreed, new rates apply to ongoing work as the rates are issued.

7.4 If client or SEG should become bankrupt or make an assignment for the benefit of creditors, SEG, or trustee in bankruptcy, shall be paid the reasonable value of all work theretofore performed, and the obligations of all parties under the agreement shall thereupon terminate. In determining reasonable value under this paragraph, the agreement shall be deemed reasonable.

SECTION 8: OWNERSHIP OF DOCUMENTS

8.1 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by SEG as instruments of service, shall remain the property of SEG.

8.2 Client agrees that all reports and other work furnished to the client or his agents, which are not paid for, will be returned upon demand and will not be used by the client or others for any purpose whatsoever.

8.3 SEG will retain pertinent records relating to the services performed for a period not exceeding three years following submission of the report, during which period the records will be made available to the client at reasonable times.

SECTION 9: CLIENT CHANGES

9.1 In the event any changes are made in the plans and specifications by the client, or persons other than SEG, client agrees to hold SEG harmless from any liability arising out of such changes and the client assumes full responsibility unless the client has given SEG prior notice and has received SEG's written consent for such changes.

SECTION 10: INSURANCE

10.1 SEG and its agents, staff, and consultants employed by it are protected by Worker's compensation insurance and maintain coverage under public liability and property damage insurance policies which SEG deems to be adequate. Certificates for all such policies of insurance shall be provided to client upon request in writing. SEG shall not be responsible for any loss, damage or liability beyond the amounts, limits, and conditions of such insurance. SEG shall not be responsible for any loss, damage, or liability arising from any acts by clients, its agents, staff, and other consultants employed by it. Provided however such insurance coverage should be for not less than one million dollars.

SECTION 11: TERMINATION

11.1 This agreement may be terminated by either party upon written notification, or seven (7) days after written notice in the event of nonpayment (see Section 7), any breach of any provision of this agreement, in the event of substantial failure of performance by the other party, or if the client suspends the work for more than three (3) months. In the event of termination, SEG will be paid for services performed prior to the date of termination plus reasonable termination expenses, including the cost of completing analyses, records, and reports necessary to document job status at the time of termination.

SECTION 12: RISK ALLOCATION

12.1 There are a variety of risks which potentially affect SEG by virtue of entering into an agreement to perform professional engineering services on the client's behalf. In order for the client to obtain the benefit of a fee which includes a lesser allowance for dealing with SEG's risks, the client agrees to limit SEG's liability to the client and to all other parties for claims arising out of SEG's performance of the services described in this agreement. The

total aggregate liability of SEG will not exceed $50,000 for negligent professional acts, errors or omissions, and the client agrees to indemnify SEG for all liabilities in excess of the monetary limits established above.

12.2 Client agrees that in no instance shall SEG be responsible, in total or in part, for the errors or omissions of any other Design Professional, Contractor, Subcontractor or any other party. Client also agrees that SEG shall not be responsible for the means, methods, procedures, performance or safety of the construction contractors or subcontractors or for their errors or omissions. Client agrees to indemnify, hold harmless and defend SEG from and against any and all loss, expenses, including attorney fees, injury, damage, liability or cost claims arising out of the services performed by SEG or work by Client or other parties upon the real property described above, except where such loss, injury, damage, liability, cost, expenses or claims are the result of the negligence or willful misconduct of SEG, its agents, employees, or officers. Liability resulting from design defects (as defined in California Civil Code Section 2782.5) shall be the sole responsibility of the Client.

SECTION 13: DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS

13.1 Client warrants that a reasonable effort to inform SEG of known or suspected hazardous materials on or near the project site has been made.

13.2 Hazardous materials may exist at a site when there is no reason to believe they could or should be present. SEG and client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a re-negotiation of the scope of work or termination of services. The client recognizes that the discovery of hazardous materials may necessitate immediate protective measures to safeguard the public health and safety and agrees to compensate SEG for measures that in our professional opinion are justified to preserve and protect the health and safety of site personnel and the public.

13.3 SEG agrees to notify client as soon as practically possible should hazardous materials be encountered at the site that pose a threat to human health, safety, or the environment. Client agrees that the discovery of hazardous materials at the site must legally be reported to the proper authorities as required by Federal, State, and local regulations. Client agrees to make the required report at the recommendation of SEG or, if unable to do so, authorizes SEG to make this report. Client also agrees to inform the property owner in the event that hazardous materials are encountered at the site.

13.4 Notwithstanding any other provision of the agreement, client waives any claim against SEG, and to the maximum extent permitted by law agrees to defend, indemnify, and save SEG harmless from any claim, liability, and/or defense costs for injury or loss arising from SEG's discovery of unanticipated hazardous materials or suspected hazardous materials including any costs created by delay of the project and any cost associated with possible reduction of the property's value. Client will be responsible for ultimate disposal of any samples secured by SEG which are found to be contaminated.

SECTION 14: AQUIFER CONTAMINATION

14.1 The client recognizes that it is impossible for SEG to know the exact composition of a site's subsurface even after conducting a comprehensive exploratory program. As a result, there is a risk that drilling and sampling may result in contamination of certain subsurface areas, as when a boring passes through a contaminated zone, connecting it to one or more aquifers not previously contaminated and capable of spreading contamination.

14.2 Although SEG will take all reasonable precautions to avoid such an occurrence, client waives any claim against, and agrees to defend, indemnify and save SEG harmless from any claim or liability for injury or loss which may arise as a result of cross-contamination caused by drilling, sampling, or monitoring well installation. Client also agrees to adequately compensate SEG for any time spent and expenses incurred in defense of any such claim.

SECTION 15: DISPUTES RESOLUTION

15.1 All claims, disputes, and other matters in controversy between SEG and client arising out of or in any way related to this agreement will be submitted to "Alternative Dispute Resolution" (ADR) such as mediation and/or arbitration, before and as a condition precedent to other remedies provided by law. If and to the extent client and SEG have agreed on methods for resolving such disputes, then such methods will be set forth in the "Alternative Dispute Resolution Agreement" which, if attached, is incorporated and made a part of this agreement.

15.2 If a dispute at law related to the services provided under this agreement arises and that dispute requires litigation instead of ADR as provided above, then:

(1) the claim will be brought and tried in judicial jurisdiction of the court of the county where SEG's principal place of business is located and client waives the right to remove the action to any other county or judicial jurisdiction; and

(2) the prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorney's fees, and other claim related expenses.

SECTION 16: ASSIGNS

16.1 Neither the client nor SEG may delegate, assign, sublet or transfer his duties or interest in this Agreement without the written consent of the other party.

16.2 The contractual agreement between the client and SEG shall pertain only to the benefit of the parties hereto, and no third party shall have any rights hereunder.

SECTION 17: GOVERNING LAW AND SURVIVAL

17.1 The laws of the State of California will govern the validity of these terms, their interpretation and performance.

17.2 If any of the provisions contained in this agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provision will not be impaired. Limitations of liability and indemnities will survive termination of this agreement for any cause.

SMITH-EMERY GEOSERVICES

Manager of GeoServices

May 19, 2020
Date

AGREED TO AND ACCEPT
(By party responsible for p

Triumph Management Company
c/o James Suhr & Associates, LLC
Client Name (please print)

authorized agent
Signature and Title

5/29/2020
Date

Smith-Emery GeoServices Job Name:

Phase I Environmental Site Assessment

905 Beacon Avenue

Los Angeles, CA 90015

SEG Proposal LA-8430

Site Contact:_____

Phone: (213) 675-4473

Email: tim@SuhrAndAssociates.com

Ms. Ayesha Syeda, Manager of GeoServices
Ph: 213-699-7812
Fax: 213-741-8621
Please Check the Appropriate Box(s) if optional item(s) are requested:
Ayesha@smithemerylabs.com

- ☐ Environmental Lien and AUL Research ($350.00/parcel)
- ☐ RUSH Turnaround Requested.
- ☐ Paper Copy of Report Requested — NONE NEEDED
- ☐ Overnight Report Delivery Requested

Please return a signed copy to Smith-Emery GeoServices

Note: Only the signing party or parties of this proposal will be listed in SEG's r parties that want reliance on this report may rely on the report only if designated the signing party, and are bound by the terms and conditions of this proposal.

REFERENCES

1. AAI 2013, *40 CFR Part 312: Standards and Practices for All Appropriate Inquiries*, Prepared by United States of America Environmental Protection Agency, November 2013.

2. ASTM 2013, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Prepared by ASTM International, November 2013.

3. Department of Water Resources, Bulletin 104. Planned utilization of the ground water basins of the coastal plain of Los Angeles County, with Appendix B: Ground water geology. June 1961. Reprinted April 1988.

4. The US Geological Survey Canoga Park Quadrangle, Los Angeles County, California.

5. The Los Angeles County Department of Public Works, Hydrologic Records.

6. Geotracker, web site (www.geotracker.swrcb.ca.gov) maintained by the Regional Water Quality Control Board.

7. State of California, Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR), DOMS 2.0, Online Mapping System Website (http://maps.conservation.ca.gov/doms/index.html).

8. EDR Radius Map Report, State Oil/Gas Well Information, for 905 Beacon Avenue, June 1st, 2020.

ZINNER consultants

To: City of Los Angeles Department of City Planning
CC: Jim Suhr

From: John Zinner, Greg Collins

Date: July 8, 2020

Subject: CEQA SCPE Energy and Water Efficiency Compliance for 905 Beacon

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The purpose of this memo is to describe how 905 Beacon, proposed by DHA Investment Co., LLC, will meet the Sustainable Communities Project CEQA Exemption (SCPE) criteria regarding energy and water efficiency (Public Resources Code Section 21155.1(a)(8)). 905 Beacon is a 7-story mixed-use project, of which 5 are habitable, with 145 residential units and 2,400 SF of commercial space.

The Subsection (a) (8) requirement:

> The buildings in the transit priority project are 15 percent more energy efficient than required by Chapter 6 of Title 24 of the California Code of Regulations and the buildings and landscaping are designed to achieve 25 percent less water usage than the average household use in the region.

The energy and water efficiency compliance strategies are separately described below. Each of the three sites complies with both requirements, as follows:

- Energy Use: **15.7%** less than allowed by Title 24, Part 6 2019
- Water Use: **63.3%** below the MWD baseline

ENERGY EFFICIENCY

Regulatory Framework

Subsection (a) (8) requires that a project be 15 percent more energy efficient than required by Title 24, Part 6, the California Energy Code (*note:* it's officially *Part* 6 of the California Code of Regulations, not *Chapter* 6 as it's titled in the CEQA language).

Title 24 is updated, typically every three years. Title 24 2019 has been approved and took effect January 1, 2017. Projects will need to comply under the Title 24 version in effect when filing a building permit application.

Title 24, Part 6 provides two compliance paths:

1. The *Prescriptive Path*, under which projects must implement a specified list of strategies.

2. The *Performance Path*, under which projects use California Energy Commission-approved energy modeling software to demonstrate that projects meet the required level of energy performance (typically stated in kBTUs/square foot/year). Under the Performance Path, project teams can utilize any energy efficiency strategy as long as the required energy performance level is met.

To enable the Building Official to readily confirm compliance with the Subsection (a) (8) requirement of 15 percent more efficient than Title 24, Part 6, the project must use the Performance Path.

Energy Modeling Process

Preliminary whole building energy modeling was conducted to determine the anticipated Title 24 energy code performance. The following sections provide greater detail into the energy modeling process, the necessary design measures, and the resulting performance.

The preliminary energy modeling was done using one of the software tools approved by the California Energy Commission for Title 24 compliance. Because a full compliance model requires a level of detail and design complexity not yet available for this project, we utilized the software in non-compliance mode to generate proposed and Title 24 baseline models to compare energy performance of the current design concepts.

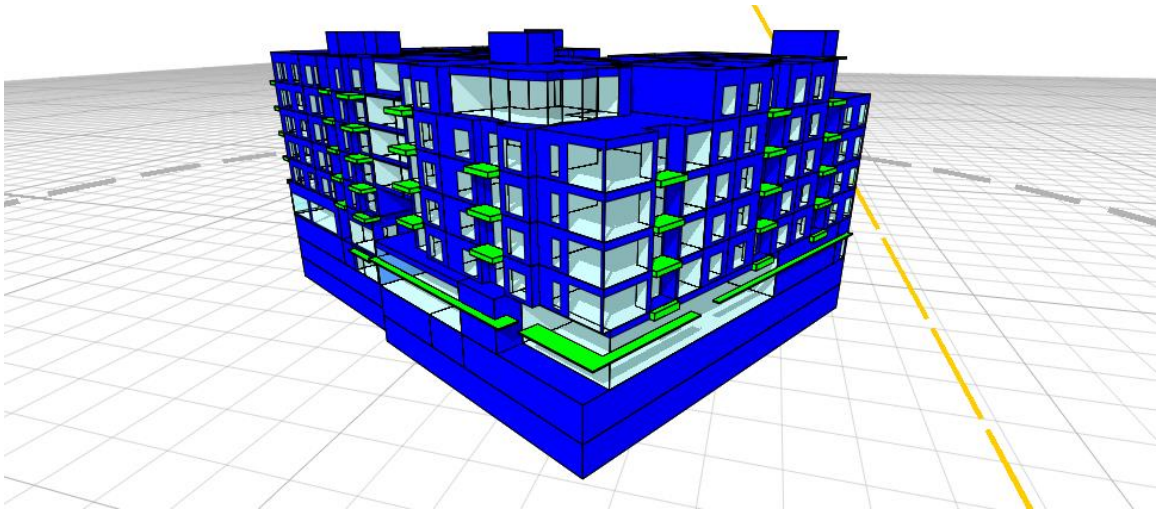

Figure 1. Renderings of the preliminary energy models from IES Virtual Environment

Energy Efficiency Measures

The energy efficiency measures used in the design and analysis of the project are summarized in this section. The measures are organized into categories (building envelope, lighting, HVAC, domestic water heating and renewables). To see more detailed inputs for the proposed and Title 24 baseline models, refer to Appendix A.

Building Envelope

1. **Exterior walls with R-21 batt insulation:** This high density insulation provides a greater R-value than that of typically used insulation products which improves insulation and, hence, reduces heating and cooling energy use.
2. **Wood-framed roofs with R-38 batt insulation:** The thickness of the proposed insulation also increases the R-value, reducing heating and cooling energy use.
3. **High-reflectance roofing rated by the Cool Roof Rating Council:** A "cool roof" reflects additional solar heat, which reduces cooling energy in cooling-dominated climates like Southern California.
4. **Overhanging balconies for solar shading:** Projecting balconies provide shading for windows that keep solar heat out, which reduces cooling energy use. Another benefit is reduced glare, which makes the space more comfortable.
5. **High-performance windows with dual-paned low-emissivity glazing:** Dual-paned windows provide additional insulation over single-paned windows, while high performance, low-emissivity coatings help to let in mostly visible light while blocking other light that brings in heat without adding another purpose. These combined effects reduce cooling energy during the summer and heating during the winter.

Lighting

1. **Optimized façade to capitalize on natural daylight first:** Optimizing the façade is a means of balancing the amount of windows. Windows let in natural daylight, which allows electric lights to be turned off, but they also bring in additional heating and cooling when compared to an insulated wall. The result is a building that provides ample daylighting while not being excessive, decreasing overall lighting, heating and cooling energy use.

2. **High-efficacy, LED lamp types for common areas:** High-efficacy LED fixtures provide more lumens (light output) per watt (electric input) than other lamps like fluorescent or incandescent.
3. **Daylighting controls for all indoor, nonresidential spaces:** Also known as "daylight harvesting," these controls sense the amount of natural daylight entering a space to automatically dim the electric lights, saving energy while maintaining light levels.
4. **Occupancy controls with dimming for most common area lighting:** Occupancy controls sense when spaces are vacant for a period of time and automatically turn off lights, saving energy as compared to leaving them on.

HVAC System

1. **High-efficiency 19 SEER split system heat pumps for heating, ventilating and air-conditioning (HVAC):** Split system heat pumps have one outdoor unit connected to one indoor fan coil unit (FCU). Seasonal energy efficiency ratio (SEER) represents the "average" efficiency of HVAC equipment. By increasing this value over typical code-minimum efficiencies, the equipment provides the same amount of heating and cooling while using less electricity to operate it. Providing individual systems for each apartment allows the system to be powered from the tenant's electric meter, which tends to encourage more responsible use and lower energy consumption.

Domestic Water Heating

1. **Centralized hot water system:** Centralized water heating systems are larger and use more efficient equipment than individual heating within the units (condensing water heaters are around 95% efficient). They have recirculation controls to keep water in the lines hot, which reduces waste. They also make it easier to integrate into renewable energy systems like solar hot water.
2. **High-efficiency water fixtures:** Using more efficient fixtures inherently uses less hot water, which reduces energy used for water heating (while also saving potable water). This is not considered in the energy model, but it certainly an added sustainability measure.

Renewables

1. **Solar hot water:** Roof-mounted solar collectors capture the sun's renewable energy and use it to pre-heat domestic hot water. This reduces the amount of gas consumption at the water heater(s) and, hence, saves energy and emissions.

Energy Model Results

Energy modeling resulted in a preliminary design that anticipates using **15.7% less energy than the Title 24-2019** energy code requirements. Refer to the table and figure below to see additional details about the result by each energy end-use at this stage.

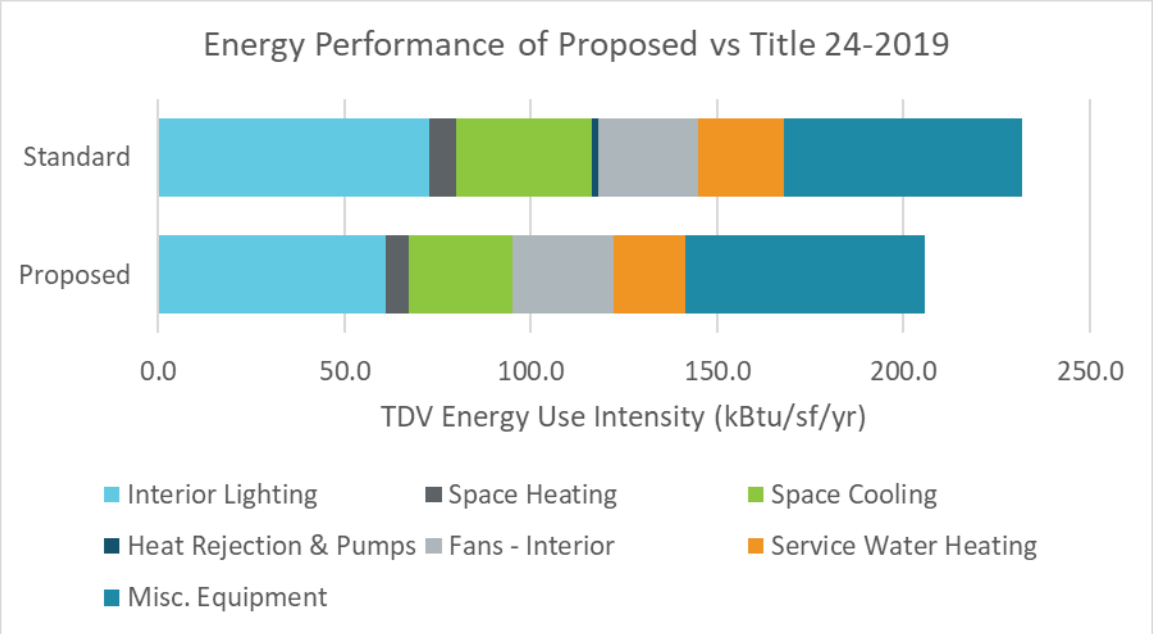

Figure 2. Energy Performance of Proposed Design Compared with the Title 24-2019 Baseline

Table 1. Energy Use Intensity (EUI) for Each Model by End-Use (kBtu/sf/yr)

Energy End-Use	Notes	Proposed	Standard	Margin
Interior Lighting	1	61.2	72.8	11.6
Space Heating	2	6.1	7.0	0.8
Space Cooling	2	27.8	36.6	8.8
Heat Rejection & Pumps	2	0.0	1.6	1.6
Fans - Interior	2	27.1	27.0	-0.1
Service Water Heating	3	19.2	22.8	3.6
Misc. Equipment	4	64.1	64.1	0.0
Compliance Total	5	**141.4**	**167.8**	**26.3**
Savings	6		**15.7%**	

Notes:
1. Corresponds to "lighting" energy category in EEMs section.
2. Corresponds to "building envelope" and "HVAC system" energy categories.
3. Corresponds to "domestic water heating" energy category.
4. Does not correspond with any EEMs as it is unregulated "process" energy.
5. Compliance total excludes misc equipment loads in alignment with Standards.
6. Percent savings determined by dividing total margin by total baseline energy.

WATER EFFICIENCY

Regulatory Framework

The Subsection (a) (8) water efficiency requirement is that each project must achieve a 25 percent water use reduction from the *regional average household water use*.

For residential and mixed-use, residential/commercial buildings, the baseline is the average regional water use in Gallons Per Capita Per Day of 131 gallons as stated in the Metropolitan Water District *Water Tomorrow Annual Report to the California State Legislature, Covering Fiscal Year 2018/19* (p. 29). It is available at: http://www.mwdh2o.com/PDF_In_The_Community/3.1_1.2_Regional_Progress_Report.pdf.

This is multiplied by 2.42, the assumed residential occupancy, based on the most recent census data and utilized for environmental analysis for by the City of Los Angeles all multi-family residential units, to determine the average daily water use per residential unit.

The projected water use for the building assumes the maximum fixture flow rates allowed under the City of Los Angeles Green Building Code for residential and nonresidential uses. Other elements are calculated using accepted industry practice. The fixture flow rates are as follows:

1. **Showerheads:** 1.8 gpm (gallons per minute)
2. **Lavatory faucets:** 1.2 gpm (residential), 0.4 gpm (nonresidential)
3. **Kitchen faucets:** 1.5 gpm
4. **Tank water closets (toilets):** 1.28 gpf (gallon per flush)
5. **Urinals:** 0.125 gpf
6. **Clothes washers:**, Energy Star certified, 3.2 WF (water factor)
7. **Dishwashers:** Energy Star certified, 4 GPC (gallons per cycle)

Projected Savings

The *Water Use Analysis* for the project, which is included in Appendix B, calculates both the baseline and projected water use and then the percentage savings. The projected water usage of the commercial space is included in the total water use per unit per day total. The projected water use is based on compliance with the City of Los Angeles Green Building Code, which includes water efficiency measures designed to reduce water use. These water efficiency measures would sufficiently reduce water use to meet the 25% threshold; no additional water reduction measures would be necessary.

The water use reduction is from 317.1 (baseline per unit) to 116.5 gpd (projected per unit). **The projected water use savings is 63.3%.**

APPENDIX A: ENERGY MODEL INPUTS

This section provides information on the detailed information that was specified in the energy models. The tables include:

- **Characteristics of Fenestration** – Describes the window framing and glazing properties used for the proposed design as well as for the Title 24-2019 Standard building model.
- **Characteristics of Opaque Constructions** – Describes the roof, wall and floor construction types for the proposed design as well as for the Title 24-2019 Standard building model.
- **Characteristics of HVAC and DHW Systems** – Describes the heating, ventilation and air-conditioning (HVAC) and domestic hot water (DHW) systems in the proposed design model as well as for the Title 24-2019 Standard building model.

Each table lists both the characteristics of the proposed design and that of the Title 24 Standard building so that they can be compared against one another. For example, the proposed roof has a better U-factor than the Title 24 model, which means the proposed roof will provide more insulating value and, hence, lower heat loss in the winter and heat gain in the summer.

Table 2. Characteristics of HVAC and DHW Systems

System Type	Proposed Design	Title 24-2019 (High-rise Residential)
HVAC System (Residential Units)		
Type	High efficiency air-cooled split system heat pumps	System 1 - Single zone AC (constant volume, cycling)
Efficiency	Cooling: 19.0 SEER Heating: 10.0 HSPF	Cooling: per T24-2019, Table 110.2-B by auto-sized capacity Heating: 80% furnace
Fan Power	0.22 W/cfm	0.35 W/cfm per T24
HVAC System (Nonres Spaces)		
Type	High efficiency packaged single-zone heat pumps with VAV fans	System 5 - Packaged VAV system
Efficiency	Cooling/heating: per T24-2019, Table 110.2-B by auto-sized capacity	Cooling: per T24-2019, Table 110.2-B by auto-sized capacity Heating: boiler plant with 80% efficiency
Fan Power	~0.5 W/cfm	~1.0 W/cfm per T24
DHW System		
Type	Centralized condensing natural gas boilers w/ recirculation	Centralized natural gas boilers w/ recirculation.
Efficiency	95%	80%
Solar Fraction	20%	20%

Table 3. Characteristics of Opaque Constructions

Building Component	Proposed Design	Title 24-2019 High-rise Residential | CZ 09
Roof		
Description	Wood framed rafter roof w/ R-38 batt insulation; CRRC-certified cool roofing	Insulation entirely above deck; R-34.93 continuous insulation
U-Factor	0.028	0.028
Aged Solar Reflectance	0.70	0.63
Thermal Emittance	0.75	0.85
Solar Reflectance Index (SRI)	82	-
Exterior Wall - Levels 1-2		
Description	2x6 Metal-framed, 16" o.c. w/ R-21 batt insulation in cavity + R-5 continuous insulation	Steel-framed wall; R-11 batt + R-10 continuous insulation
U-Factor	0.094	0.069
Exterior Wall - Levels 3+		
Description	2x6 Wood-framed, 16" o.c. w/ R-21 batt insulation in cavity	Steel-framed wall; R-11 batt + R-10 continuous insulation
U-Factor	0.069	0.069
Below-grade Wall		
Description	12" concrete wall; uninsulated	Below-grade mass wall
C-Factor	C-1.14	C-1.14
Exterior Raised Floor		
Description	Wood framed floor w/ R-19 batt insulation between framing	Metal-framed / Other
U-Factor	0.037	0.039
Exterior Floor Over Garage		
Description	Concrete slab; uninsulated	Metal-framed / Other type; R-10.91 continuous insulation
U-Factor	0.269	0.071
Slab-on-Grade Floor		
Description	Concrete (mass) floor; uninsulated	Slab floor
F-Factor	F-0.730	F-0.730

Table 4. Characteristics of Fenestration

Building Component	Proposed Design	Title 24-2019 High-rise Residential | CZ 09
Windows - Residential		
Glazing Description	Double paned, low-e	Fixed Window
Framing Description	NFRC-rated framing system	-
Assembly U-Factor	0.36	0.36
SHGC	0.25	0.25
Windows - Storefront (Nonresidential)		
Glazing Description	Double paned, low-e	Curtainwall/Storefront (Nonres)
Framing Description	NFRC-rated framing system	-
Assembly U-Factor	0.41	0.41
SHGC	0.26	0.26

APPENDIX B. WATER CALCULATION INPUTS

905 Beacon

Water Use Analysis

Fixture Type	Flow Rate[1] (gpm or gpf)		Duration (min or # flush)		Daily Uses		Occupants	=	Gallons Per Day
Residential Water Use									
Showerheads residential	1.8	x	8	x	1	x	351	=	5,054.4
Lavatory faucets residential	1.2	x	0.25	x	5	x	351	=	526.5
Kitchen faucets	1.5	x	4	x	1	x	351	=	2,106.0
Tank water closets (M)	1.28	x	1	x	5	x	176	=	1,126.4
Tank water closets (F)	1.28	x	1	x	5	x	176	=	1,126.4
Clotheswashers (gal/person-day)[2]	15.1						351	=	5,300.1
Dishwashers (gal/person-day)[3]	0.7						351	=	245.7
Nonresidential Water Use									
Lavatory faucets nonresidential	0.5	x	0.25	x	3	x	58	=	21.8
Water closets - nonresidential (F)	1.28	x	1	x	3	x	58	=	222.7
Water closets - nonresidential (M)	1.28	x	1	x	1	x	29	=	37.1
Urinals	0.125	x	1	x	2	x	29	=	7.3
Restaurant kitchen(s)[4]									625.2
Common showerhead for cyclists[5]	1.8	x	8	x	1	x	2	=	28.8
Potable Water Irrigation (daily)[6]								=	375.0
Pool Loss[7]								=	81.8
Total Daily Baseline Water Use (BWU) in Gallons Per Day								=	**16,885.1**
Average Water Use per Household per Day = 16,885.1 gpd/145 units								=	**116.5**

Current Water Use per Multi-Family Household (MWD 2018/19 Water Tomorrow Annual Report Gallons Per Capita Per Day of 131 x census estimate of 2.42 occupants per multi-family residential unit)	**317.1**
Water Use per Unit per Day (inc. appliances and landscape)	**116.5**
Percent Reduction from MWD Baseline	**63.3**

Assumptions

145 residential units x 2.42 occupants/unit (per City of LA) = 351 occupants

- Nonresidential occupants per Table A, Chapter 4, California Plumbing Code occupant load factor of 1 person/ 200 SF retail & office & 1 person/30 SF restaurant. Commercial = 2,400 sf; 1,600 sf (2/3 total) = 54 occupants; 800 retail (1/3 total) = 4 occcupants

  54 restaurant occupants
+ 4 retail occupants
  58 nonresidential occupants

1. Flow rates are the maximum allowed under City of Los Angeles Green Building Code (Form GRN 17).

2. Clothes Washer in each unit (baseline per Homes v4, 15.1 gal per person per day, WF=9.5). High efficiency

3. Dishwashers assumed in each unit (baseline per Homes v4, 0.7 gal per person per day, 6.5 GPC). High efficiency dishwashers can be 4 GPC, therefore 61% of baseline, or 0.43 gal per person per day.

4. Restaurant kitchen water use based on 1) assume kitchen = 50% of restaurant space, and 2) US EPA Savings Calculator for ENERGY STAR Certified Commercial Kitchen Equipment. Sample calculated result for 2,935 sf kitchen = 418,586 gpy/365 days = 1,146.8 gpd

5. 3% nonresidential occupants

6. Landscaping potable water use calculated using LEED v4 Outdoor Water Use Reduction Calculator v02. Assumes efficient Irrigation system and drought tolerant plants. Estimated landscape area is 4,300 SF.

7. Pool/spa surface total 657 SF. Avg 0.25 inch/0.021 ft loss per day, or 81.8 gallons to be made up per day.

APPENDIX G

MITIGATION MEASURES FROM PRIOR EIRS

Incorporation of Applicable Mitigation Measures from Prior EIRs

Public Resources Code (PRC) Section 21151.2 requires that a Transit Priority Project (TPP) also incorporate all feasible mitigation measures, performance standards, or criteria from prior applicable EIRs. Prior applicable EIRs include SCAG's 2020-2045 RTP/SCS Program EIR.

The Mitigation Monitoring and Reporting Program for the 2020-2045 RTP/SCS Program EIR (SCAG MMRP) include programmatic mitigation measures to be implemented by SCAG and project-level mitigation measures that SCAG encourages local agencies to implement, as appropriate and feasible, as part of project-specific environmental review.

As stated by SCAG, SCAG has no authority to impose mitigation measures on individual projects for which it is not the lead agency. However, for projects seeking to use CEQA streamlining and/or tier from the Program EIR, project-level mitigation measures included in the Program EIR (or comparable measures) should be required by the local lead agency as appropriate and feasible. Many lead agencies have existing regulations, policies, and/or standard conditions of approval that address potential impacts. Nothing in the Program EIR is intended to supersede existing regulations and policies of individual jurisdictions. Since SCAG has no authority to impose mitigation measures, mitigation measures to be implemented by local jurisdictions are subject to a lead agency's independent discretion as to whether measures are applicable to projects in their respective jurisdictions. Lead agencies may use, amend, or not use measures identified in the Program EIR as appropriate to address project-specific conditions. The determination of significance and identification of appropriate mitigation is solely the responsibility of the lead agency.

To comply with PRC Section 21151.2, the City has reviewed all mitigation measures contained in the SCAG MMRP (shown in Table G-1) and determined their applicability to the Project. For each such mitigation measure, the City considered whether to incorporate the mitigation measure from SCAG's Program EIR or whether an equally effective existing City mitigation measure/standard condition of approval or other City regulation or federal, state, or regional regulation would supersede SCAG's mitigation measures. The City's applicability determination is found in Table G-1.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
AESTHETICS	
Impact AES-1 Potential for the Plan to have a substantial adverse effect on a scenic vista **PMM AES-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to address potential aesthetic impacts to scenic vistas, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Use a palette of colors, textures, building materials that are graffiti-resistant, and/or plant materials that complement the surrounding landscape and development. b) Use contour grading to better match surrounding terrain. Contour edges of major cut-and-fill to provide a more natural looking finished profile. c) Design new corridor landscaping to respect existing natural and man-made features and to complement the dominant landscaping of the surrounding areas. d) Replace and renew landscaping along corridors with road widenings, interchange projects, and related improvements. e) Retain or replace trees bordering highways, so that clear-cutting is not evident. f) Provide new corridor landscaping that respects and provides appropriate transition to existing natural and man-made features and is complementary to the dominant landscaping or native habitats of surrounding areas. g) Reduce the visibility of construction staging areas by fencing and screening these areas with low contrast materials consistent with the surrounding environment, and by revegetating graded slopes and exposed earth surfaces at the earliest opportunity; h) Use see-through safety barrier designs (e.g. railings rather than walls)	**Not applicable**. PRC Section 21099, enacted by Senate Bill 743, provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." Consistent with SB 743, City of Los Angeles Zoning Information File ZI No. 2452 indicates that visual resources, aesthetic character, shade and shadow, light and glare, and scenic vistas or any other aesthetic impact shall not be considered a significant impact for infill projects within Transit Priority Areas (TPAs) pursuant to CEQA. Per the City's Zone Information and Map Access System (ZIMAS), ZI No. 2452 is applicable to the Project Site. The Project is an infill affordable housing development, consisting of 145 dwelling units within a High Quality Transit Area (HQTA) and a TPA. As such, the Project's aesthetic impacts shall not be considered significant impacts on the environment pursuant to PRC Section 21099. Thus, incorporation of this mitigation measure is not required.
Impact AES-2 Potential to substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway See PMM AES-1, above.	**Not applicable.** See discussion of the applicability of PMM AES-1, above.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
Impact AES-3 Potential to substantially degrade the existing visual character or quality of public views (public views are those that are experienced from publicly accessible vantage points). In an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality	**Not applicable**. PRC Section 21099, enacted by Senate Bill 743, provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."
PMM AES-2: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to address potential aesthetic impacts that substantially degrade visual character, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:	Consistent with SB 743, City of Los Angeles Zoning Information File ZI No. 2452 indicates that visual resources, aesthetic character, shade and shadow, light and glare, and scenic vistas or any other aesthetic impact shall not be considered a significant impact for infill projects within TPAs pursuant to CEQA. Per ZIMAS, ZI No. 2452 is applicable to the Project Site.
a) Minimize contrasts in scale and massing between the projects and surrounding natural forms and development, minimize their intrusion into important viewsheds, and use contour grading to better match surrounding terrain in accordance with county and city hillside ordinances, where applicable. b) Design landscaping along highway corridors to add significant natural elements and visual interest to soften the hard-edged, linear transportation corridors. c) Require development of design guidelines for projects that make elements of proposed buildings/facilities visually compatible or minimize visibility of changes in visual quality or character through use of hardscape and softscape solutions. Specific measures to be addressed include setback buffers, landscaping, color, texture, signage, and lighting criteria. d) Design projects consistent with design guidelines of applicable general plans. e) Require that sites are kept in a blight/nuisance-free condition. Remove blight or nuisances that compromise visual character or visual quality of project areas including graffiti abatement, trash removal, landscape management, maintenance of signage and billboards in good condition, and replace compromised native vegetation and landscape. f) Where sound walls are proposed, require sound wall construction and design methods that account for visual impacts as follows: - use transparent panels to preserve views where sound walls would block views from residences;	The Project is an infill affordable housing development, consisting of 145 dwelling units within an HQTA and a TPA. As such, the Project's aesthetic impacts shall not be considered significant impacts on the environment pursuant to PRC Section 21099. Thus, incorporation of this mitigation measure is not required.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
- use landscaped earth berm or a combination wall and berm to minimize the apparent sound wall height; - construct sound walls of materials whose color and texture complements the surrounding landscape and development; g) Design sound walls to increase visual interest, reduce apparent height, and be visually compatible with the surrounding area; and landscape the sound walls with plants that screen the sound wall, preferably with either native vegetation	
Impact AES-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area **PMM AES-3:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to address potential aesthetic impacts that substantially degrade visual character, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Use lighting fixtures that are adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties. b) Restrict the operation of outdoor lighting for construction and operation activities to the hours of 7:00 a.m. to 10:00 p.m. or as otherwise required by applicable local rules or ordinances. c) Use high pressure sodium and/or cut-off fixtures instead of typical mercury-vapor fixtures for outdoor lighting. d) Use unidirectional lighting to avoid light trespass onto adjacent properties. e) Design exterior lighting to confine illumination to the project site, and/or to areas which do not include light-sensitive uses. f) Provide structural and/or vegetative screening from light-sensitive uses. g) Shield and direct all new street and pedestrian lighting away from light-sensitive off-site uses. h) Use non-reflective glass or glass treated with a non-reflective coating for all exterior windows and glass used on building surfaces. i) Architectural lighting shall be directed onto the building surfaces and have low reflectivity to minimize glare and limit light onto adjacent properties.	**Not applicable**. PRC Section 21099, enacted by Senate Bill 743, provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." Consistent with SB 743, City of Los Angeles Zoning Information File ZI No. 2452 indicates that visual resources, aesthetic character, shade and shadow, light and glare, and scenic vistas or any other aesthetic impact shall not be considered a significant impact for infill projects within TPAs pursuant to CEQA. Per the City's ZIMAS, ZI No. 2452 is applicable to the Project Site. The Project is an infill affordable housing development, consisting of 145 dwelling units within a HQTA and a TPA. As such, the Project's aesthetic impacts shall not be considered significant impacts on the environment pursuant to PRC Section 21099. Thus, incorporation of this mitigation measure is not required.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
AGRICULTURAL RESOURCES	
Impact AG-1 Potential for the Plan to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use **PMM AG-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to address potential adverse effects on agricultural resources, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Require project sponsors to mitigate for loss of farmland by providing permanent protection of in-kind farmland in the form of easements, fees, or elimination of development rights/potential. b) Project relocation or corridor realignment to avoid Prime Farmland, Unique Farmland, or Farmland of Local or Statewide Importance. c) Maintain and expand agricultural land protections such as urban growth boundaries. d) Provide for mitigation fees to support a mitigation bank1 that invests in farmer education, agricultural infrastructure, water supply, marketing, etc. that enhance the commercial viability of retained agricultural lands. e) Minimize severance and fragmentation of agricultural land by constructing underpasses and overpasses at reasonable intervals to provide property access. f) Use berms, buffer zones, setbacks, and fencing to reduce conflicts between new development and farming uses and protect the functions of farmland.	**Not applicable.** No farmland or agricultural activity exists on or in the vicinity of the Project Site. Thus, incorporation of this mitigation measure is not required.
Impact AG-2 Potential for the Plan to conflict with existing zoning for agricultural use, or a Williamson Act contract **PMM AG-2:** Project level mitigation measures can and should be considered by Lead Agencies as applicable and feasible. Measures to reduce substantial adverse effects on Williamson Act contracts to the maximum extent practicable, as determined appropriate by each Lead Agency, may include the following, or other comparable measures:	**Not applicable.** The Project Site is not zoned for agricultural production, there is no farmland at the Project Site, and there are no Williamson Act Contracts in effect for the Project Site (or for any sites within the City). Thus, incorporation of this mitigation measure is not required.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
a) Project relocation or corridor realignment to avoid lands in Williamson Act contracts. b) Establish conservation easements consistent with the recommendations of the Department of Conservation, or 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.), 10-year Williamson Act contracts (Government Code Section 51200 et seq.), or use of other conservation tools available from the California Department of Conservation Division of Land Resource Protection.	
Impact AG-3 Potential for the Plan to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) **PMM AG-3:** Project level mitigation measures can and should be considered by Lead Agencies as applicable and feasible. Measures to reduce substantial adverse effects, through the conversion of Farmland to maximum extent practicable, as determined appropriate by each Lead Agency, may include the following, or other comparable measures: a) Minimize construction related impacts to agricultural and forestry resources by locating materials and stationary equipment in such a way as to prevent conflict with agriculture and forestry resources**.**	**Not applicable.** Neither the Project Site nor the surrounding area is zoned for forest land, timberland, or Timberland Production. As such, the Project would not result in any conflicts any zoning related to forest land, timberland, or Timberland Production zoning. The Project Site is located in an urbanized area of the City and is currently developed with a surface parking lot. Thus, incorporation of this mitigation measure is not required.
Impact AG-4 Potential for the Plan to result in the loss of forest land or conversion of forest land to non-forest use See PMM AG-3, above.	**Not applicable.** See discussion of the applicability of PMM AES-1, above.
Impact AG-5 Potential for the Plan to involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use **PMM AG-4:** Project level mitigation measures can and should be considered by Lead Agencies as applicable and feasible. Measures to reduce substantial adverse effects, through the conversion of Farmland, to the maximum extent practicable, as determined appropriate by each Lead Agency, may include the following, or other comparable measures:	**Not applicable** Since the Project Site is currently not used for any agricultural uses and is not forest land, no agricultural use or forest land would be converted. The Project Site is located in an urbanized area of the City and is currently developed with a surface parking lot. Thus, incorporation of this mitigation measure is not required.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
a) Design proposed projects to minimize, to the greatest extent feasible, the loss of the highest valued agricultural land. b) Redesign project features to minimize fragmenting or isolating Farmland. Where a project involves acquiring land or easements, ensure that the remaining non-project area is of a size sufficient to allow economically viable farming operations. The project proponents shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management. c) Reconnect utilities or infrastructure that serve agricultural uses if these are disturbed by project construction. If a project temporarily or permanently cuts off roadway access or removes utility lines, irrigation features, or other infrastructure, the project proponents shall be responsible for restoring access as necessary to ensure that economically viable farming operations are not interrupted. **PMM AG-5:** Project level mitigation measures can and should be considered by Lead Agencies as applicable and feasible. Measures to reduce substantial adverse effects, through the conversion of Farmland, to the maximum extent practicable, as determined appropriate by each Lead Agency, may include the following, or other comparable measures: a) Manage project operations to minimize the introduction of invasive species or weeds that may affect agricultural production on adjacent agricultural land. Where a project has the potential to introduce sensitive species or habitats or have other spill-over effects on nearby agricultural lands, the project proponents shall be responsible for acquiring easements on nearby agricultural land and/or financially compensating for indirect effects on nearby agricultural land. Easements (e.g., flowage easements) shall be required for temporary or intermittent interruption in farming activities (e.g., because of seasonal flooding or groundwater seepage). Acquisition or compensation would be required for permanent or significant loss of economically viable operations.	

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Impacts and Mitigation Measure	Applicability to the Project
AIR QUALITY	
Impact AQ-1 Conflict with or obstruct implementation of the applicable air quality plan No mitigation measures required.	**Not applicable.** No mitigation measures related to this issue were identified, therefore, no mitigation measures apply to the Project.
Impact AQ-2 Potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation **PMM AQ-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Minimize land disturbance. b) Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes. c) Cover trucks when hauling dirt. d) Stabilize the surface of dirt piles if not removed immediately. e) Limit vehicular paths on unpaved surfaces and stabilize any temporary roads. f) Minimize unnecessary vehicular and machinery activities. g) Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway. h) Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities. i) On Caltrans projects, Caltrans Standard Specifications 10-Dust Control, 17-Watering, and 18-Dust Palliative shall be incorporated into project specifications. j) Require contractors to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that could be used an aggregate of 40 or more hours for the construction project. Prepare a plan for approval by the applicable air district demonstrating achievement of the applicable percent reduction for a CARB-approved fleet. k) Ensure that all construction equipment is properly tuned and maintained.	**Mitigation Measure Applied.** The City has determined to apply this mitigation measure to the Project.

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Impacts and Mitigation Measure	Applicability to the Project
l) Minimize idling time to 5 minutes—saves fuel and reduces emissions. m) Provide an operational water truck on-site at all times. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway. n) Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators. o) Develop a traffic plan to minimize community impacts as a result of traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites. Project sponsors should consider developing a goal for the minimization of community impacts. p) As appropriate require that portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, obtain CARB Portable Equipment Registration with the state or a local district permit. Arrange appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site. q) Require projects to use Tier 4 Final equipment or better for all engines above 50 horsepower (hp). In the event that construction equipment cannot meet to Tier 4 Final engine certification, the Project representative or contractor must demonstrate through future study with written findings supported by substantial evidence that is approved by SCAG before using other technologies/strategies. Alternative applicable strategies may include, but would not be limited to, construction equipment with Tier 4 Interim or reduction in the number and/or horsepower rating of construction equipment and/or limiting the number of construction equipment operating at the same time. All equipment must be tuned and maintained in compliance with the manufacturer's recommended maintenance schedule and specifications. All maintenance records for each equipment and their contractor(s) should make available for inspection and remain on-site for a period of at least two years from completion of construction, unless the individual project can demonstrate that Tier 4 engines would not be required to mitigate emissions below significance thresholds. Project	

Table G-1
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Impacts and Mitigation Measure	Applicability to the Project
sponsors should also consider including ZE/ZNE technologies where appropriate and feasible. r) Projects located within the South Coast Air Basin should consider applying for South Coast AQMD "SOON" funds which provides funds to applicable fleets for the purchase of commercially available low-emission heavy-duty engines to achieve near-term reduction of NOx emissions from in-use off-road diesel vehicles. s) Projects located within AB 617 communities should review the applicable Community Emissions Reduction Plan (CERP) for additional mitigation that can be applied to individual projects. t) Where applicable, projects should provide information about air quality related programs to schools, including the Environmental Justice Community Partnerships (EJCP), Clean Air Ranger Education (CARE), and Why Air Quality Matters programs. u) Projects should work with local cities and counties to install adequate signage that prohibits truck idling in certain locations (e.g., near schools and sensitive receptors). v) As applicable for airport projects, the following measures should be considered: a. Considering operational improvements to reduce taxi time and auxiliary power unit usage, where feasible. Additionally, consider single engine taxing, if feasible as allowed per Federal Aviation Administration guidelines. b. Set goals to achieve a reduction in emissions from aircraft operations over the lifetime of the proposed project. c. Require the use of ground service equipment (GSE) that can operate on battery-power. If electric equipment cannot be obtained, require the use of alternative fuel, the cleanest gasoline equipment, or Tier 4, at a minimum. w) As applicable for port projects, the following measures should be considered: a. Develop specific timelines for transitioning to zero emission cargo handling equipment (CHE).	

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Impacts and Mitigation Measure	Applicability to the Project
b. Develop interim performance standards with a minimum amount of CHE replacement each year to ensure adequate progress. c. Use short side electric power for ships, which may include tugboats and other ocean-going vessels or develop incentives to gradually ramp up the usage of shore power. d. Install the appropriate infrastructure to provide shore power to operate the ships. Electrical hookups should be appropriately sized. e. Maximize participation in the Port of Los Angeles' Vessel Speed Reduction Program or the Port of Long Beach's Green Flag Initiation Program in order to reduce the speed of vessel transiting within 40 nautical miles of Point Fermin. f. Encourage the participation in the Green Ship Incentives. g. Offer incentives to encourage the use of on-dock rail. x) As applicable for rail projects, the following measures should be considered: a. Provide the highest incentives for electric locomotives and then locomotives that meet Tier 5 emission standards with a floor on the incentives for locomotives that meet Tier 4 emission standards. y) Projects that will introduce sensitive receptors within 500 feet of freeways and other sources should consider installing high efficiency of enhanced filtration units, such as Minimum Efficiency Reporting Value (MERV) 13 or better. Installation of enhanced filtration units can be verified during occupancy inspection prior to the issuance of an occupancy permit. z) Develop an ongoing monitoring, inspection, and maintenance program for the MERV filters. a. Disclose potential health impacts to prospective sensitive receptors from living in close proximity to freeways or other sources of air pollution and the reduced effectiveness of air filtration systems when windows are open or residents are outside. b. Identify the responsible implementing and enforcement agency to ensure that enhanced filtration units are installed on-site before a permit of occupancy is issued.	

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Impacts and Mitigation Measure	Applicability to the Project
c. Disclose the potential increase in energy costs for running the HVAC system to prospective residents. d. Provide information to residents on where MERV filters can be purchased. e. Provide recommended schedule (e.g., every year or every six months) for replacing the enhanced filtration units. f. Identify the responsible entity such as future residents themselves, Homeowner's Association, or property managers for ensuring enhanced filtration units are replaced on time. g. Identify, provide, and disclose ongoing cost-sharing strategies, if any, for replacing the enhanced filtration units. h. Set criteria for assessing progress in installing and replacing the enhanced filtration units; and i. Develop a process for evaluating the effectiveness of the enhanced filtration units. aa) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities	
Impact AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard See PMM-AQ-1, above.	**No mitigation applies.** See discussion of the applicability of PMM AQ-1, above.
Impact AQ-4 Expose sensitive receptors to substantial pollutant concentrations See PMM-AQ-1, above.	**No mitigation applies.** See discussion of the applicability of PMM AQ-1, above.
Impact AQ-5 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people No mitigation measures required.	**Not applicable.** No mitigation measures related to this issue were identified, therefore, no mitigation measures apply to the Project.
BIOLOGICAL RESOURCES	
Impact BIO-1 Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or	**Incorporated through regulatory compliance.** The Project would be required to comply with similar existing regulations that are equal to or more effective than this mitigation measure. The Project is located in a developed, urbanized area and would be replacing existing development.

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Impacts and Mitigation Measure	Applicability to the Project
by the California Department of Fish and Game or US Fish and Wildlife Service **PMM BIO-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to threatened and endangered species, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Require project design to avoid occupied habitat, potentially suitable habitat, and designated critical habitat, wherever practicable and feasible. b) Where avoidance is determined to be infeasible, provide conservation measures to fulfill the requirements of the applicable authorization for incidental take pursuant to Section 7 or 10(a) of the federal ESA, Section 2081 of the California ESA to support issuance of an incidental take permit, and/or as identified in local or regional plans. Conservation strategies to protect the survival and recovery of federally and state-listed endangered and local special status species may include: i. Impact minimization strategies ii. ii. Contribution of in-lieu fees for in-kind conservation and mitigation efforts iii. Use of in-kind mitigation bank credits iv. Funding of research and recovery efforts v. Habitat restoration vi. Establishment of conservation easements vii. Permanent dedication of in-kind habitat c) Design projects to avoid desert native plants protected under the California Desert Native Plants Act, salvage and relocate desert native plants, and/or pay in lieu fees to support off-site long-term conservation strategies. d) Temporary access roads and staging areas will not be located within areas containing sensitive plants, wildlife species or native habitat wherever feasible, so as to avoid or minimize impacts to these species.	The Project would not be developed on open space. Development of the Project would not result in adverse effects to any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, or the California Native Plant Society. Also, the Project would not result in any adverse effects to any occupied habitat, potentially suitable habitat, or designated critical habitat. Review of the United States Fish and Wildlife Service's National Wetlands Inventory identified no protected wetlands in the vicinity of the Project Site, and the Project Site is not located within a riparian area. Further, as the Project Site is fully developed, and there are no open spaces with water courses such as streams or lakes within or adjacent to the Project Site, the Project Site and vicinity do not support any riparian or wetland habitat, as defined by Section 404 of the Clean Water Act. Therefore, the Project would not have a substantial adverse effect on wetlands, riparian habitat, or other sensitive natural communities identified in federal, state, or local plans, policies, and regulations. Furthermore, the Project Site is not located in or adjacent to a Biological Resource Area as defined by the City. Moreover, the Project Site and immediately surrounding area are not within or near a designated Significant Ecological Area. The Project Site is currently developed with a surface parking lot. There are 2 Mexican fan palm trees on the Project Site; 10 street trees located adjacent to the Project Site, including 8 California fan palm trees and 2 Australian willow trees; and 1 citrus tree located offsite and adjacent to the Project Site. None of these trees are considered to be a protected tree as defined by the Protected Tree and Shrub Ordinance 186873. The Applicant proposes to remove the two (2) non-protected on-site trees and 10 street trees. Prior to any work on the right-of-way, the Applicant will be required to obtain approved plans from the Department of Public Works. As there currently is no approved right-of-way improvement plan and for purposes of conservative analysis and the requirements of CEQA, Planning has analyzed the worst-case potential for removal of all street trees. Note, no street tree or protected tree may be removed without prior

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Impacts and Mitigation Measure	Applicability to the Project
e) Develop and implement a Worker Environmental Awareness Program (environmental education) to inform project workers of their responsibilities to avoid and minimize impacts on sensitive biological resources. f) Retain a qualified botanist to document the presence or absence of special status plants before project implementation. g) Appoint a qualified biologist to monitor construction activities that may occur in or adjacent to occupied sensitive species' habitat to facilitate avoidance of resources not permitted for impact. h) Appoint a qualified biologist to monitor implementation of mitigation measures. i) Schedule construction activities to avoid sensitive times for biological resources (e.g. steelhead spawning periods during the winter and spring, nesting bird season) and to avoid the rainy season when erosion and sediment transport is increased. j) Develop an invasive species control plan associated with project construction. k) If construction occurs during breeding seasons in or adjacent to suitable habitat, include appropriate sound attenuation measures required for sensitive avian species and other best management practices appropriate for potential local sensitive wildlife. l) Conduct pre-construction surveys to delineate occupied sensitive species' habitat to facilitate avoidance. m) Where projects are determined to be within suitable habitat and may impact listed or sensitive species that have specific field survey protocols or guidelines outlined by the USFWS, CDFW, or other local agency, conduct preconstruction surveys that follow applicable protocols and guidelines and are conducted by qualified and/or certified personnel.	approval of the Board of Public Works/Urban Forestry (BPW) under LAMC Sections 62.161 - 62.171. At the time of preparation of this SPCE, no approvals have been given for any tree removals on-site or in the right-of-way by BPW. Additionally, a Board of Public Works policy requires as a condition of a street tree removal permit that each approved street tree removal be replaced by the permit applicant on a 2 to 1 basis with a 24-inch box size tree stock and be watered for a minimum three-year period. All removed trees would be replaced in accordance with the City's tree replacement requirements.. The trees that are to be removed have the potential to support nesting birds that are protected under the Migratory Bird Treaty Act (MBTA), as well as the regulations of the California Fish and Game Code, which prohibits take of all birds and their active nests, consistent with PMM-BIO-1. The removal of trees would occur in accordance with the MBTA and state and local requirements. Thus, the Project would not harm any species protected by the Federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of Division 2 of the Fish and Game Code), or the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code). Specifically, in conformance with the MBTA, tree removal activities would take place outside of the nesting season (February 1 to September 1) to the greatest extent practicable. To the extent that vegetation removal activities must occur during the nesting season, a biological monitor would be present during the removal activities to ensure that no active nests would be impacted, or a nesting bird survey is to be completed prior to construction to document all active bird nests. If active nests are found, a 300-foot buffer (500 feet for raptors) would be established until the fledglings have left the nest.
Impact BIO-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service **PMM BIO-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can	**No mitigation applies.** The Project is located in a developed, urban area and would be replacing existing development. The Project would not be developed on existing open space. Therefore, development of the Project would not result in adverse effects to any riparian habitat or other sensitive habitat or support any species identified or designated as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the

Table G-1
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Impacts and Mitigation Measure	Applicability to the Project
and should consider mitigation measures to reduce substantial adverse effects related to riparian habitats and other sensitive natural communities, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Consult with the USFWS and NMFS where such state-designated sensitive or riparian habitats provide potential or occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to the federal ESA. b) Consult with the USFS where such state-designated sensitive or riparian habitats provide potential or occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to the federal ESA and any additional species afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national forests in the six-county area: Angeles, Cleveland, Los Padres, and San Bernardino. c) Consult with the CDFW where such state-designated sensitive or riparian habitats provide potential or occupied habitat for state-listed rare, threatened, and endangered species afforded protection pursuant to the California ESA, or Fully Protected Species afforded protection pursuant to the State Fish and Game Code. d) Consult with the CDFW pursuant to the provisions of Section 1600 of the State Fish and Game Code as they relate to Lakes and Streambeds. e) Consult with the USFWS, USFS, CDFW, and counties and cities in the SCAG region, where state designated sensitive or riparian habitats are occupied by birds afforded protection pursuant to the MBTA during the breeding season. f) Consult with the CDFW for state-designated sensitive or riparian habitats where furbearing mammals, afforded protection pursuant to the provisions of the State Fish and Game Code for fur-beaming mammals, are actively using the areas in conjunction with breeding activities. g) Require project design to avoid sensitive natural communities and riparian habitats, wherever practicable and feasible. h) Where avoidance is determined to be infeasible, develop sufficient conservation measures through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) to protect sensitive natural	U.S. Fish and Wildlife Service. Thus, incorporation of this mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
communities and riparian habitats and develop appropriate compensatory mitigation, where required. i) Appoint a qualified wetland biologist to monitor construction activities that may occur in or adjacent to sensitive communities. j) Appoint a qualified wetland biologist to monitor implementation of mitigation measures. k) Schedule construction activities to avoid sensitive times for biological resources and to avoid the rainy season when erosion and sediment transport is increased. l) When construction activities require stream crossings, schedule work during dry conditions and use rubber-wheeled vehicles, when feasible. Have a qualified wetland scientist determine if potential project impacts require a Notification of Lake or Streambed Alteration to CDFW during the planning phase of projects. m) Consult with local agencies, jurisdictions, and landowners where such state-designated sensitive or riparian habitats are afforded protection pursuant an adopted regional conservation plan. n) Install fencing and/or mark sensitive habitat to be avoided during construction activities. o) Salvage and stockpile topsoil (the surface material from 6 to 12 inches deep) and perennial native plants, when recommended by the qualified wetland biologist, for use in restoring native vegetation to areas of temporary disturbance within the project area. Salvage of soils containing invasive species, seeds and/or rhizomes will be avoided as identified by the qualified wetland biologist. p) Revegetate with appropriate native vegetation following the completion of construction activities, as identified by the qualified wetland biologist. q) Complete habitat enhancement (e.g., through removal of non-native invasive wetland species and replacement with more ecologically valuable native species). r) Use Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of native vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport.	
Impact BIO-3 Have a substantial adverse effect on State or Federally Protected Wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means	**Not applicable.** The Project Site is not located on protected wetlands or water features that are in the jurisdiction and responsibility of the U.S.

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Impacts and Mitigation Measure	Applicability to the Project
PMM BIO-3: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to wetlands, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency. a) Require project design to avoid federally protected aquatic resources consistent with the provisions of Sections 404 and 401 of the CWA, wherever practicable and feasible. b) Where the lead agency has identified that a project, or other regionally significant project, has the potential to impact other wetlands or waters, such as those considered Waters Of the State of California under the State Wetland Definition and Procedures for Dischargers of Dredged or Fill Material to Waters of the State, not protected under Section 404 or 401 of the CWA, seek comparable coverage for these wetlands and waters in consultation with the SWRCB, applicable RWQCB, and CDFW. c) Where avoidance is determined to be infeasible, develop sufficient conservation measures to fulfill the requirements of the applicable authorization for impacts to federal and state protected aquatic resource to support issuance of a permit under Section 404 of the CWA as administered by the USACE. The use of an authorized Nationwide Permit or issuance of an individual permit requires the project applicant to demonstrate compliance with the USACE's Final Compensatory Mitigation Rule. The USACE reviews projects to ensure environmental impacts to aquatic resources are avoided or minimized as much as possible. Consistent with the administration's performance standard of "no net loss of wetlands" a USACE permit may require a project proponent to restore, establish, enhance or preserve other aquatic resources in order to replace those affected by the proposed project. This compensatory mitigation process seeks to replace the loss of existing aquatic resource functions and area. Project proponents required to complete mitigation are encouraged to use a watershed approach and watershed planning information. The new rule establishes performance standards, sets timeframes for decision making, and to the extent possible, establishes equivalent requirements and standards for the three sources of compensatory mitigation:	Army Corps of Engineers or any other public agencies and/or Lead Agencies. Thus, incorporation of this mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
-- Permittee-responsible mitigation -- Contribution of in-kind in-lieu fees -- Use of in-kind mitigation bank credits -- Where avoidance is determined to be infeasible, and d) Where avoidance is determined to be infeasible and proposed projects' impacts exceed an existing Nationwide Permit (NWP) and/or California SWRCB-certified NWP, or applicable County Special Area Management Plan (SAMP), the lead agency should provide USACE and SWRCB (where applicable) an alternative analysis consistent with the Least Environmentally Damaging Practicable Alternatives in this order of priorities: -- Avoidance -- Impact Minimization -- On-site alternatives -- Off-site alternatives e) Require review of construction drawings by a certified wetland delineator as part of each project-specific environmental analysis to determine whether aquatic resources will be affected and, if necessary, perform formal wetland delineation.	
Impact BIO-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites **PMM BIO-4:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to wildlife movement, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Consult with the USFS where impacts to migratory wildlife corridors may occur in an area afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national	**Substantially conforms through regulatory compliance.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. The Project Site is located in a developed urban area, and the Project would replace existing development. The Project would not be developed on existing open space or sensitive habitat. The Project Site is currently developed with a surface parking lot. There are 2 Mexican fan palm trees on the Project Site; 10 street trees located adjacent to the Project Site, including 8 California fan palm trees and 2 Australian willow trees; and 1 citrus tree located offsite and adjacent to the Project Site. None of these trees is considered a protected tree as defined by the Protected Tree and Shrub Ordinance 186873. The Applicant proposes to remove the two (2) non-protected on-site trees and 10 street trees. Prior to any work on the right-of-way, the Applicant will be required to obtain approved plans from the Department

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Impacts and Mitigation Measure	Applicability to the Project
forests in the six-County area: Angeles, Cleveland, Los Padres, and San Bernardino. b) Consult with counties, cities, and other local organizations when impacts may occur to open space areas that have been designated as important for wildlife movement related to local ordinances or conservation plans. c) Prohibit construction activities within 500 feet of occupied breeding areas for wildlife afforded protection pursuant to Title 14 § 460 of the California Code of Regulations protecting fur-bearing mammals, during the breeding season. d) Conduct a survey to identify active raptor and other migratory nongame bird nests by a qualified biologist at least two weeks before the start of construction at project sites from February 1 through August 31. e) Prohibit construction activities with 300 feet of occupied nest of birds afforded protection pursuant to the Migratory Bird Treaty Act, during the breeding season. f) Ensure that suitable nesting sites for migratory nongame native bird species protected under the Migratory Bird Treaty Act and/or trees with unoccupied raptor nests should only be removed prior to February 1, or following the nesting season. g) When feasible and practicable, proposed projects will be designed to minimize impacts to wildlife movement and habitat connectivity and preserve existing and functional wildlife corridors. h) Conduct site-specific analyses of opportunities to preserve or improve habitat linkages with areas on- and off-site. i) Long linear projects with the possibility of impacting wildlife movement should analyze habitat linkages/wildlife movement corridors on a broad scale to avoid critical narrow choke points that could reduce function of recognized movement corridor. j) Require review of construction drawings and habitat connectivity mapping by a qualified biologist to determine the risk of habitat fragmentation. k) Pursue mitigation banking to preserve habitat linkages and corridors (opportunities to purchase, maintain, and/or restore offsite habitat). l) When practicable and feasible design projects to promote wildlife corridor redundancy by including multiple connections between habitat patches. m) Evaluate the potential for installation of overpasses, underpasses, and culverts to create wildlife crossings in cases where a roadway or other transportation project may interrupt the flow of species through their	of Public Works. As there currently is no approved right-of-way improvement plan and for purposes of conservative analysis and the requirements of CEQA, Planning has analyzed the worst-case potential for removal of all street trees. Note, no street tree or protected tree may be removed without prior approval of the Board of Public Works/Urban Forestry (BPW) under LAMC Sections 62.161 - 62.171. At the time of preparation of this SPCE, no approvals have been given for any tree removals on-site or in the right-of-way by BPW. Additionally, a Board of Public Works policy requires as a condition of a tree removal permit that each approved street tree removal be replaced by the permit applicant on a 2 to 1 basis with a 24-inch box size tree stock and be watered for a minimum three-year period. All removed trees would be replaced in accordance with the City's tree replacement requirements. The trees that are to be removed have the potential to support nesting birds, which are protected under the Migratory Bird Treaty Act (MBTA), which prohibits take of all birds and their active nests, as well as the regulations of the California Fish and Game Code Consistent with Mitigation Measure MM-BIO-4(b). The removal of trees would occur in accordance with the MBTA and state and local requirements. Thus, the Project would not harm any species protected by the Federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), the Native Plant Protection Act (Chapter 10 commencing with Section 1900 of Division 2 of the Fish and Game Code), or the California Endangered Species Act (Chapter 1.5 commencing with Section 2050 of Division 3 of the Fish and Game Code). Therefore, development of the Project would not conflict with any local policies or ordinances protecting biological resources.

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Impacts and Mitigation Measure	Applicability to the Project
habitat. Retrofitting of existing infrastructure in project areas should also be considered for wildlife crossings for purposes of mitigation. n) Install wildlife fencing where appropriate to minimize the probability of wildlife injury due to direct interaction between wildlife and roads or construction. o) Where avoidance is determined to be infeasible, design sufficient conservation measures through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) and in accordance with the respective counties and cities general plans to establish plans to mitigate for the loss of fish and wildlife movement corridors and/or wildlife nursery sites. The consideration of conservation measures may include the following measures, in addition to the measures outlined in MM-BIO-1(b), where applicable: -- Wildlife movement buffer zones -- Corridor realignment -- Appropriately spaced breaks in center barriers -- Stream rerouting -- Culverts -- Creation of artificial movement corridors such as freeway under- or overpasses -- Other comparable measures p) Where the lead agency has identified that a RTP/SCS project, or other regionally significant project, has the potential to impact other open space or nursery site areas, seek comparable coverage for these areas in consultation with the USFWS, CDFW, NMFS, or other local jurisdictions. q) Incorporate applicable and appropriate guidance (e.g. FHWA-HEP-16-059), as well as best management practices, to benefit pollinators with a focus on native plants.	
Impact BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance **PMM BIO-5:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce conflicts with local policies and ordinances protecting biological resources, as applicable and feasible. Such	**Substantially conforms through regulatory compliance.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. The Project Site is located in a developed urban area, and the Project would replace existing development. The Project would not be developed on existing open space. The Project Site is currently developed with a surface parking lot. There are 2 Mexican fan palm trees on the Project Site; 10 street trees

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Impacts and Mitigation Measure	Applicability to the Project
measures may include the following or other comparable measures identified by the Lead Agency: a) Consult with the appropriate local agency responsible for the administration of the policy or ordinance protecting biological resources. b) Prioritize retention of trees on-site consistent with local regulations. Provide adequate protection during the construction period for any trees that are to remain standing, as recommended by an International Society of Arboriculture (ISA) certified arborist. c) If specific project area trees are designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," obtain approval for encroachment or removals through the appropriate entity, and develop appropriate mitigation measures at that time, to ensure that the trees are replaced. Mitigation trees shall be locally collected native species, as directed by a qualified biologist. d) Appoint an ISA certified arborist to monitor construction activities that may occur in areas with trees are designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," to facilitate avoidance of resources not permitted for impact. Before the start of any clearing, excavation, construction or other work on the site, securely fence off every protected tree deemed to be potentially endangered by said site work. Keep such fences in place for duration of all such work. Clearly mark all trees to be removed. e) Establish a scheme for the removal and disposal of logs, brush, earth and other debris that will avoid injury to any protected tree. Where proposed development or other site work could encroach upon the protected perimeter of any protected tree, incorporate special measures to allow the roots to breathe and obtain water and nutrients. Minimize any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter. Require that no change in existing ground level occur from the base of any protected tree at any time. Require that no burning or use of equipment with an open flame occur near or within the protected perimeter of any protected tree. f) Require that no storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees occur from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. Require that no heavy	located adjacent to the Project Site, including 8 California fan palm trees and 2 Australian willow trees; and 1 citrus tree located offsite and adjacent to the Project Site. None of these trees is considered a protected tree as defined by the Protected Tree and Shrub Ordinance 186873. The Applicant proposes to remove the two (2) non-protected on-site trees. With the requirement to improve the public right-of-way and without an approved right-of-way plan, a worst-case potential is proposed for the removal of all 10 street trees. All removed trees would be replaced in accordance with the City's tree replacement requirements. The Project Site does not contain any protected trees. In addition, the Project would comply with the City's existing Protected Tree and Shrub Ordinance 186873, LAMC Sections 62.161 - 62.171, and the Board of Public Works policy for tree replacement that is similar to PMM BIO-5. Thus, development of the Project would not conflict with any local policies or ordinances protecting biological resources.

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Impacts and Mitigation Measure	Applicability to the Project
construction equipment or construction materials be operated or stored within a distance from the base of any protected trees. Require that wires, ropes, or other devices not be attached to any protected tree, except as needed for support of the tree. Require that no sign, other than a tag showing the botanical classification, be attached to any protected tree. g) Thoroughly spray the leaves of protected trees with water periodically during construction to prevent buildup of dust and other pollution that would inhibit leaf transpiration, as directed by the certified arborist. h) If any damage to a protected tree should occur during or as a result of work on the site, the appropriate local agency will be immediately notified of such damage. If, such tree cannot be preserved in a healthy state, as determined by the certified arborist, require replacement of any tree removed with another tree or trees on the same site deemed adequate by the local agency to compensate for the loss of the tree that is removed. Remove all debris created as a result of any tree removal work from the property within two weeks of debris creation, and such debris shall be properly disposed of in accordance with all applicable laws, ordinances, and regulations. Design projects to avoid conflicts with local policies and ordinances protecting biological resources i) Where avoidance is determined to be infeasible, sufficient conservation measures to fulfill the requirements of the applicable policy or ordinance shall be developed, such as to support issuance of a tree removal permit. The consideration of conservation measures may include: -- Avoidance strategies -- Contribution of in-lieu fees -- Planting of replacement trees -- Re-landscaping areas with native vegetation post-construction -- Other comparable measures developed in consultation with local agency and certified arborist.	
Impact BIO-6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **PMM BIO-6:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects on	**Not applicable.** The Project Site is not subject to any provisions of any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Furthermore, the Project Site is not within or adjacent to an existing Significant Ecological Area. Thus, incorporation of the mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
HCPs and NCCPs, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Consult with the appropriate federal, state, and/or local agency responsible for the administration of HCPs or NCCPs. b) Wherever practicable and feasible, the project shall be designed to avoid lands preserved under the conditions of an HCP or NCCP. c) Where avoidance is determined to be infeasible, sufficient conservation measures to fulfill the requirements of the HCP and/or NCCP, which would include but not be limited to applicable authorization for incidental take pursuant to Section 7 or 10(a) of the federal Endangered Species Act or Section 2081 of the California ESA, shall be developed to support issuance of an incidental take permit or any other permissions required for development within the HCP/NCCP boundaries. The consideration of additional conservation measures would include the measures outlined in SMM-BIO-2, where applicable.	
CULTURAL RESOURCES	
Impact 3.5-1 Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5 **PMM CULT-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to historical resources, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Pursuant to CEQA Guidelines Section 15064.5, conduct a record search during the project planning phase at the appropriate Information Center to determine whether the project area has been previously surveyed and whether historical resources were identified. b) During the project planning phase, retain a qualified architectural historian, defined as an individual who meets the Secretary of the Interior's (SOI) Professional Qualification Standards (PQS) in Architectural History, to conduct historic architectural surveys if a built environment resource greater than 45 years in age may be affected by the project or if recommended by the Information Center.	**Not applicable.** Regarding historical resources, the Project Site is currently developed with a parking lot and does not contain any historical resources. Northwest of the site is 908 Burlington Avenue, which is identified in the Westlake Recovery Redevelopment Plan Area as an eligible historic site. Though this property is in proximity to the site, it is not adjacent to the site. Regarding archaeological resources, no mitigation applies. The Project Site is located in an urbanized area of the City and is currently developed. Given the disturbed nature of the soils at the Project Site due to previous development, the probability of encountering archaeological resources at the site is low. However, the Project Applicant would be required to comply with the City's Standard Condition of Approval for the Inadvertent Discovery of Unknown Archaeological Resources, which requires the following: • If any archaeological materials are encountered during the course of Project development, all further development activity in the vicinity of the materials shall halt and:

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Impacts and Mitigation Measure	Applicability to the Project
c) Comply with Section 106 of the National Historic Preservation Act (NHPA) including, but not limited to, projects for which federal funding or approval is required for the individual project. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. These mitigation measures may include, but are not limited to the following: -- Employ design measures to avoid historical resources and undertake adaptive reuse where appropriate and feasible. If resources are to be preserved, as feasible, carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. If resources would be impacted, impacts should be minimized to the extent feasible. -- Where feasible, noise buffers/walls and/or visual buffers/landscaping should be constructed to preserve the contextual setting of significant built resources. d) If a project requires the relocation, rehabilitation, or alteration of an eligible historical resource, the Secretary of the Interior's Standards for the Treatment of Historic Properties should be used to the maximum extent possible to ensure the historical significance of the resource is not impaired. The application of the standards should be overseen by an architectural historian or historic architect meeting the SOI PQS. Prior to any construction activities that may affect the historical resource, a report, meeting industry standards, should identify and specify the treatment of character-defining features and construction activities and be provided to the Lead Agency for review and approval. e) If a project would result in the demolition or significant alteration of a historical resource eligible for or listed in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or local register, recordation should take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, and	○ The services of an archaeologist shall then be secured by contacting the South Central Coastal Information Center (657-278-5395) located at California State University Fullerton, or a member of the Society of Professional Archaeologist (SOPA) or a SOPA-qualified archaeologist, who shall assess the discovered material(s) and prepare a survey, study, or report evaluating the impact; ○ The archaeologist's survey, study or report shall contain a recommendation(s), if necessary, for the preservation, conservation, or relocation of the resource; and ○ The Project Applicant shall comply with the recommendations of the evaluating archaeologist, as contained in the survey, study, or report. • Project development activities may resume once copies of the archaeological survey, study or report are submitted to: SCCIC Department of Anthropology McCarthy Hall 477 CSU Fullerton 800 North State College Boulevard Fullerton, CA 92834 • Prior to the issuance of any building permit, the Project Applicant shall submit a letter to the case file indicating what, if any, archaeological reports have been submitted, or a statement indicating that no material was discovered. • A covenant and agreement binding the Project Applicant to this condition shall be recorded prior to the issuance of a grading permit. Thus, application of this mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
should be performed by an architectural historian or historian who meets the SOI PQS. Recordation should meet the SOI Standards and Guidelines for Architectural and Engineering, which defines the products acceptable for inclusion in the HABS/HAER/HALS collection at the Library of Congress. The specific scope and details of documentation should be developed at the project level in coordination with the Lead Agency. f) During the project planning phase, obtain a qualified archaeologist, defined as one who meets the SOI PQS for archaeology, to conduct a record search at the appropriate Information Center of the California Historical Resources Information System (CHRIS) to determine whether the project area has been previously surveyed and whether resources were identified. g) Contact the NAHC to request a Sacred Lands File search and a list of relevant Native American contacts who may have additional information. h) During the project planning phase, obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the qualified professional, the Lead Agency, or the Information Center. In the event the qualified professional or Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources. Survey shall be conducted where the records indicate that no previous survey has been conducted, or if survey has not been conducted within the past 10 years. If tribal resources are identified during tribal outreach, consultation, or the record search, a Native American representative traditionally affiliated with the project area, as identified by the NAHC, shall be given the opportunity to provide a representative or monitor to assist with archaeological surveys. i) If potentially significant archaeological resources are identified through survey, and impacts to these resources cannot be avoided, a Phase II Testing and Evaluation investigation should be performed by a qualified archaeologist prior to any construction-related ground-disturbing activities to determine significance. If resources determined significant or unique through Phase II testing, and avoidance is not possible, appropriate resource-specific mitigation measures should be established by the lead agency, in consultation with consulting tribes, where appropriate, and undertaken by qualified personnel. These might include a Phase III data recovery program implemented by a qualified archaeologist and performed in accordance with the OHP's Archaeological Resource Management	

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Impacts and Mitigation Measure	Applicability to the Project
Reports (ARMR): Recommended Contents and Format and Guidelines for Archaeological Research Designs. Additional options can include 1) interpretative signage, or 2) educational outreach that helps inform the public of the past activities that occurred in this area. Should the project require extended Phase I testing, Phase II evaluation, or Phase III data recovery, a Native American representative traditionally affiliated with the project area, as indicated by the NAHC, shall be given the opportunity to provide a representative or monitor to assist with the archaeological assessments. The long-term disposition of archaeological materials collected from a significant resource should be determined in consultation with the affiliated tribe(s), where relevant; this could include curation with a recognized scientific or educational repository, transfer to the tribe, or respectful reinternment in an area designated by the tribe. j) In cases where the project area is developed and no natural ground surface is exposed, sensitivity for subsurface resources should be assessed based on review of literature, geology, site development history, and consultation with tribal parties. If this archaeological desktop assessment indicates that the project is located in an area sensitive for archaeological resources, as determined by the Lead Agency in consultation with a qualified archaeologist, the project should retain an archaeological monitor and, in the case of sensitivity for tribal resources, a tribal monitor, to observe ground disturbing operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property. The archaeological monitor should be supervised by an archaeologist meeting the SOI PQS k) Conduct construction activities and excavation to avoid cultural resources (if identified). If avoidance is not feasible, further work may be needed to determine the importance of a resource. Retain a qualified archaeologist, and/or as appropriate, a qualified architectural historian who should make recommendations regarding the work necessary to assess significance. If the cultural resource is determined to be significant under state or federal guidelines, impacts to the cultural resource will need to be mitigated. l) Stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine whether these resources are significant, and tribal consultation can be conducted, in the case of tribal resources. If the archaeologist determines that the discovery is significant, its long-term disposition should be determined in	

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Impacts and Mitigation Measure	Applicability to the Project
consultation with the affiliated tribe(s); this could include curation with a recognized scientific or educational repository, transfer to the tribe, or respectful reinternment in an area designated by the tribe.	
Impact 3.5-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5 See PMM CULT-1, above.	**No mitigation applies.** See discussion of the applicability of PMM CULT-1, above.
Impact 3.5-3 Disturb human remains, including those interred outside of dedicated cemeteries **PMM CULT-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to human remains, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) In the event of discovery or recognition of any human remains during construction or excavation activities associated with the project, in any location other than a dedicated cemetery, cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required. b) If any discovered remains are of Native American origin, as determined by the county Coroner, an experienced osteologist, or another qualified professional: -- Contact the County Coroner to contact the NAHC to designate a Native American Most Likely Descendant (MLD). The MLD should make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. This may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains. In some cases, it is necessary for the Lead Agency, qualified archaeologist, or developer to also reach out to the NAHC to coordinate and ensure notification in the event the Coroner is not available.	**Substantially conforms through regulatory compliance** The Project would be required to comply with similar measures that are equal to or more effective than this mitigation measure. The Project Site is located within a highly developed urban area on a previously disturbed site and the potential for discovery of human remains is considered low. Nonetheless, compliance with existing regulatory requirements would ensure that potential human remains would be handled properly. • Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered unexpectedly during construction demolition and/or grading activities, it is required that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code Section 5097.98. In the event that human remains are discovered during excavation activities, the following procedure shall be observed: – Stop immediately and contact the County Coroner: 1104 N. Mission Road Los Angeles, CA 90033 323-343-0512 (8 AM to 5 PM Monday through Friday) or 323-343-0714 (after hours, Saturday, Sunday, and holidays) • If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will immediately notify the person it believes to be the most likely descendent of the deceased Native American.

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Impacts and Mitigation Measure	Applicability to the Project
-- If the NAHC is unable to identify a MLD, or the MLD fails to make a recommendation within 48 hours after being notified by the commission, or the landowner or his representative rejects the recommendation of the MLD and the mediation by the NAHC fails to provide measures acceptable to the landowner, obtain a culturally affiliated Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance.	– The most likely descendent has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods. • If the owner does not accept the descendant's recommendations, the owner or the descendent may request mediation by the NAHC. Thus, application of this mitigation measure is not required due to compliance with regulatory compliance measures.
ENERGY	
No mitigation measures required.	**No mitigation applies.** No mitigation measures related to this issue were identified, and no mitigation measures apply to the Project.
GEOLOGY AND SOILS	
Impact GEO-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42; (ii) strong seismic ground shaking; (iii) seismic-related ground failure, including liquefaction; (iv) landslides No mitigation measures required.	**No mitigation applies.** No mitigation measures related to this issue were identified, and no mitigation measures apply to the Project.
Impact GEO-2 Result in substantial soil erosion or the loss of topsoil **PMM-GEO-1**: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to historical resources, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Consistent with the CBC and local regulatory agencies with oversight of development associated with the Plan, ensure that site-specific geotechnical investigations conducted by a qualified geotechnical expert	**Substantially conforms through regulatory compliance**. The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. The Project would be required to comply with existing regulatory requirements pertaining to erosion and stormwater control, as well as the design and construction recommendations contained in a Geotechnical Investigation Report that the City require of the Project Applicant for the Project. Specifically, as required by LAMC Section 91.7006, a design-level geotechnical report shall be reviewed and approved by LADBS that incorporates the recommendations of these existing reports and demonstrates compliance with the City's existing geology and soils requirements, including but not

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Impacts and Mitigation Measure	Applicability to the Project
are conducted to ascertain soil types prior to preparation of project designs. These investigations can and should identify areas of potential failure and recommend remedial geotechnical measures to eliminate any problems. b) Consistent with the requirements of the State Water Resources Control Board (SWRCB) for projects over one acre in size, obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the SWRCB and prepare a stormwater pollution prevention plan (SWPPP) and submit the plan for review and approval by the Regional Water Quality Control Board (RWQCB). At a minimum, the SWPPP should include a description of construction materials, practices, and equipment storage and maintenance; a list of pollutants likely to contact stormwater; site-specific erosion and sedimentation control practices; a list of provisions to eliminate or reduce discharge of materials to stormwater; best management practices (BMPs); and an inspection and monitoring program. c) Consistent with the requirements of the SWRCB and local regulatory agencies with oversight of development associated with the Plan, ensure that project designs provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. Design features should include measures to reduce erosion caused by storm water. Road cuts should be designed to maximize the potential for revegetation. d) Consistent with the CBC and local regulatory agencies with oversight of development associated with the Plan, ensure that, prior to preparing project designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.	limited to LAMC Section 91.7013 pertaining to erosion control and drainage devices, Section 91.7014 regarding flood and mudflow protection, and Section 91.7016 regarding regulations for areas that are subject to slides and unstable soils. The Project would also be required to comply with the Construction General Permit Water Quality Order 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ to prevent short-term construction water quality (including erosion and sedimentation issues) impacts. These mandatory requirements would minimize soil erosion and the transmission of sediment into the City's separate storm water sewer system. The Project's construction activities would require grading, excavation, and foundation permits or approvals from the City, which would include requirements and standards designed to limit erosion. The Project would also be designed to comply with the City of Los Angeles' Low Impact Development (LID) Ordinance. Thus, application of this mitigation measure is not required due to compliance with mitigation measures .
Impact GEO-3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse No mitigation measures required.	**No mitigation applies.** No mitigation measures related to this issue were identified, and no mitigation measures apply to the Project.
Impact GEO-4 Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property No mitigation measures required	**No mitigation applies.** No mitigation measures related to this issue were identified, and no mitigation measures apply to the Project.

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Impacts and Mitigation Measure	Applicability to the Project
Impact GEO-5 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water No mitigation measures required.	**No mitigation applies.** No mitigation measures related to this issue were identified, and no mitigation measures apply to the Project.
Impact GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature **PMM GEO-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to paleontological resources. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Ensure compliance with the Paleontological Resources Preservation Act, the Federal Land Policy and Management Act, the Antiquities Act, Section 5097.5 of the Public Resources Code (PRC), adopted county and city general plans, and other federal, state and local regulations, as applicable and feasible, by adhering to and incorporating the performance standards and practices from the 2010 Society for Vertebrate Paleontology (SVP) standard procedures for the assessment and mitigation of adverse impacts to paleontological resources. b) Obtain review by a qualified paleontologist (e.g. who meets the SVP standards for a Principal Investigator or Project Paleontologist or the Bureau of Land Management (BLM) standards for a Principal Investigator), to determine if the project has the potential to require ground disturbance of parent material with potential to contain unique paleontological or resources, or to require the substantial alteration of a unique geologic feature. The assessment should include museum records searches, a review of geologic mapping and the scientific literature, geotechnical studies (if available), and potentially a pedestrian survey, if units with paleontological potential are present at the surface. c) Avoid exposure or displacement of parent material with potential to yield unique paleontological resources. d) Where avoidance of parent material with the potential to yield unique paleontological resources is not feasible:	**Substantially conforms through regulatory compliance**. The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. The Project would be required to comply with existing regulations related to the discovery of unknown paleontological resources, should they be encountered during ground disturbing activities as outlined in PMM GEO-2. If paleontological resources are discovered during excavation, grading, or construction, the City of Los Angeles Department of Building and Safety (LADBS) shall be notified immediately, and all work shall cease in the area of the find until a qualified paleontologist evaluates the find. Construction activity may continue unimpeded on other portions of the Project Site. The paleontologist shall determine the location, the time frame, and the extent to which any monitoring of earthmoving activities shall be required. The found deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2. Thus, application of this mitigation measure is not required due to compliance with regulatory compliance measures.

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Impacts and Mitigation Measure	Applicability to the Project
1. All on-site construction personnel receive Worker Education and Awareness Program (WEAP) training prior to the commencement of excavation work to understand the regulatory framework that provides for protection of paleontological resources and become familiar with diagnostic characteristics of the materials with the potential to be encountered. 2. A qualified paleontologist prepares a Paleontological Resource Management Plan (PRMP) to guide the salvage, documentation and repository of unique paleontological resources encountered during construction. The PRMP should adhere to and incorporate the performance standards and practices from the 2010 SVP Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources. If unique paleontological resources are encountered during construction, use a qualified paleontologist to oversee the implementation of the PRMP. 3. Monitor ground disturbing activities in parent material, with a moderate to high potential to yield unique paleontological resources using a qualified paleontological monitor meeting the standards of the SVP or the BLM to determine if unique paleontological resources are encountered during such activities, consistent with the specified or comparable protocols. 4. Identify where ground disturbance is proposed in a geologic unit having the potential for containing fossils and specify the need for a paleontological monitor to be present during ground disturbance in these areas. e) Avoid routes and project designs that would permanently alter unique geological features. f) Salvage and document adversely affected resources sufficient to support ongoing scientific research and education. g) Significant recovered fossils should be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility. h) Following the conclusion of the paleontological monitoring, the qualified paleontologist should prepare a report stating that the paleontological monitoring requirement has been fulfilled and summarize the results of any paleontological finds. The report should be submitted to the lead CEQA	

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Impacts and Mitigation Measure	Applicability to the Project
and the repository curating the collected artifacts, and should document the methods and results of all work completed under the PRMP, including treatment of paleontological materials, results of specimen processing, analysis, and research, and final curation arrangements.	
GREENHOUSE GAS EMISSIONS	
Impact GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment **PMM-GHG-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to greenhouse gas emissions, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Integrate green building measures consistent with CALGreen (California Building Code Title 24), local building codes and other applicable laws, into project design including: i. Use energy efficient materials in building design, construction, rehabilitation, and retrofit. ii. Install energy-efficient lighting, heating, and cooling systems (cogeneration); water heaters; appliances; equipment; and control systems. iii. Reduce lighting, heating, and cooling needs by taking advantage of light-colored roofs, trees for shade, and sunlight. iv. Incorporate passive environmental control systems that account for the characteristics of the natural environment. v. Use high-efficiency lighting and cooking devices. vi. Incorporate passive solar design. vii. Use high-reflectivity building materials and multiple glazing. viii. Prohibit gas-powered landscape maintenance equipment. ix. Install electric vehicle charging stations. x. Reduce wood burning stoves or fireplaces. xi. Provide bike lanes accessibility and parking at residential developments.	**Substantially conforms through regulatory compliance and Project Design Features.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure, such as the City's Green Building Code, which incorporates the CALGreen requirements identified in the mitigation measure. Also, the Project includes other features that are listed within the mitigation measure, including developing on a site that is located near existing transit and including bicycle parking; Additionally, as Project Design Features (PDFs) the Project would incorporate the following energy and water efficiency measures, which would reduce the Project's generation of GHG emissions: <u>Building Envelope</u> 1. Insulation 2. High-reflectance roofing 3. Overhanging balconies 4. High-performance window systems. <u>Lighting</u> • Optimized façade • High-efficacy, LED lamps for common areas • Daylighting controls for all indoor, non-residential spaces • Occupancy controls with dimming most common area lighting <u>HVAC</u> • High-efficiency 19 SEER split system heat pumps for heating, ventilation, and air conditioning (HVAC) <u>Domestic Water Heating</u> • Centralized hot water system

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Impacts and Mitigation Measure	Applicability to the Project
b) Reduce emissions resulting from projects through implementation of project features, project design, or other measures, such as those described in Appendix F of the State CEQA Guidelines. c) Include off-site measures to mitigate a project's emissions. d) Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to: i. Use energy and fuel-efficient vehicles and equipment; ii. Deployment of zero- and/or near zero emission technologies; iii. Use lighting systems that are energy efficient, such as LED technology; iv. Use the minimum feasible amount of GHG-emitting construction materials; v. Use cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production; vi. Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse; vii. Incorporate design measures to reduce energy consumption and increase use of renewable energy; viii. Incorporate design measures to reduce water consumption; ix. Use lighter-colored pavement where feasible; x. Recycle construction debris to maximum extent feasible; xi. Plant shade trees in or near construction projects where feasible; and xii. Solicit bids that include concepts listed above. e) Measures that encourage transit use, carpooling, bike-share and car-share programs, active transportation, and parking strategies, including, but not limited to the following: i. Promote transit-active transportation coordinated strategies; ii. Increase bicycle carrying capacity on transit and rail vehicles; iii. Improve or increase access to transit;	• High-efficiency water fixtures <u>Renewables</u> • Solar hot water The Project would incorporate the following water efficiency features: • Showerheads with a flow rate of 1.8 gallons per minute or less • Lavatory faucets with a flow rate of 1.2 gallons per minute or less (residential), 0.4 gallons per minute or less (non-residential) • Kitchen faucets with a flow rate of 1.5 gallons per minute or less • Urinals with a rate of 0.125 gallons per feet • Clothes washers that are Energy Star certified, 3.2 water factor • Dishwashers that are Energy Star certified, 4 gallons per cycle As discussed in the *CEQA SCPE Energy and Water Efficiency Compliance for 905 Beacon* report (included as Appendix G), the Project's inclusion of these measures would ensure that the Project is 15.7 percent more energy efficient than the Title 24 standards and would achieve approximately 63.3 percent less water usage than MWD's baseline usage, thereby achieving further consistent with regional GHG emissions reduction efforts. These Project features would result in reduced energy consumption and corresponding reduction in GHG emissions, consistent with the project-related mitigation suggested by SCAG. Collectively, these Project features and conditions as well as the Project's required regulatory compliance would result in reduced energy consumption, reduced VMT, and corresponding reduction in GHG emissions, consistent with the Project-related mitigation identified by SCAG. Thus, application of this mitigation measure is not required due to compliance with regulatory compliance measures and project design features.

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Impacts and Mitigation Measure	Applicability to the Project
iv. Increase access to common goods and services, such as groceries, schools, and day care; v. Incorporate affordable housing into the project; vi. Incorporate the neighborhood electric vehicle network; vii. Orient the project toward transit, bicycle and pedestrian facilities; viii. Improve pedestrian or bicycle networks, or transit service; ix. Provide traffic calming measures; x. Provide bicycle parking; xi. Limit or eliminate park supply; xii. Unbundle parking costs; xiii. Provide parking cash-out programs; xiv. Implement or provide access to commute reduction program; f) Incorporate bicycle and pedestrian facilities into project designs, maintaining these facilities, and providing amenities incentivizing their use; and planning for and building local bicycle projects that connect with the regional network; g) Improving transit access to rail and bus routes by incentives for construction of transit facilities within developments, and/or providing dedicated shuttle service to transit stations; and h) Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs including but not limited to measures that: i. Provide car-sharing, bike sharing, and ride-sharing programs; ii. Provide transit passes; iii. Shift single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services; iv. Provide incentives or subsidies that increase that use of modes other than single-occupancy vehicle; v. Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms; vi. Provide employee transportation coordinators at employment sites; vii. Provide a guaranteed ride home service to users of non-auto modes.	

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Impacts and Mitigation Measure	Applicability to the Project
i) Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles; j) Land use siting and design measures that reduce GHG emissions, including: i. Developing on infill and brownfields sites; ii. Building compact and mixed-use developments near transit; iii. Retaining on-site mature trees and vegetation, and planting new canopy trees; iv. Measures that increase vehicle efficiency, encourage use of zero and low emissions vehicles, or reduce the carbon content of fuels, including constructing or encouraging construction of electric vehicle charging stations or neighborhood electric vehicle networks, or charging for electric bicycles; and v. Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse. k) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities. The measures provided above are also intended to be applied in low income and minority communities as applicable and feasible.	
Impact GHG-2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases See PMM GHG-1, above.	**Substantially conforms through regulatory compliance and Project Design Features.** See discussion of the applicability of PMM GHG-1, above.
HAZARDS AND HAZARDOUS MATERIALS	
Impact HAZ-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials **PMM HAZ-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to the routine transport, use, or disposal of hazardous materials, as	**Substantially conforms through regulatory compliance.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. Project construction would involve the temporary transport, use, and disposal of potentially hazardous materials. These materials can include paints, adhesives, surface coatings, cleaning agents, fuels, and oils. All such materials would be transported, used, and disposed of in conformance with all applicable regulatory requirements, thereby eliminating the risk of

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Impacts and Mitigation Measure	Applicability to the Project
applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Where the construction or operation of projects involves the transport of hazardous material, provide a written plan of proposed routes of travel demonstrating use of roadways designated for the transport of such materials. b) Specify Project requirements for interim storage and disposal of hazardous materials during construction and operation. Storage and disposal strategies must be consistent with applicable federal, state, and local statutes and regulations. Specify the appropriate procedures for interim storage and disposal of hazardous materials, anticipated to be required in support of operations and maintenance activities, in conformance with applicable federal, state, and local statutes and regulations, in the business plan for projects as applicable and appropriate. c) Submit a Hazardous Materials Business/Operations Plan for review and approval by the appropriate local agency. Once approved, keep the plan on file with the Lead Agency (or other appropriate government agency) and update, as applicable. The purpose of the Hazardous Materials Business/Operations Plan is to ensure that employees are adequately trained to handle the materials and provides information to the local fire protection agency should emergency response be required. The Hazardous Materials Business/Operations Plan should include the following: -- The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids. -- The location of such hazardous materials. -- An emergency response plan including employee training information. -- A plan that describes the way these materials are handled, transported and disposed. d) Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction. e) Avoid overtopping construction equipment fuel gas tanks.	potentially significant hazards. In addition, Project operation does not involve the routine transport, use, or disposal of potentially hazardous materials. Any potentially hazardous materials used would be similar to any other urban residential development, and may include cleaning solvents, paints, and pesticides for landscaping. These potentially hazardous materials would be in and stored in accordance with regulatory requirements and manufacturers' instructions. Furthermore, the Project would adhere to regulatory requirements concerning source hazardous waste reduction measures and all applicable City ordinances, including the following: • All potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable federal, State, and local laws. • During subsurface excavation activities, including borings, trenching and grading, OSHA worker safety measures shall be implemented as required to preclude any exposure of workers to unsafe levels of soil-gases, including, but not limited to, methane. Thus, application of this mitigation measure is not required due to regulatory compliance.

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Impacts and Mitigation Measure	Applicability to the Project
f) Properly contain and remove grease and oils during routine maintenance of construction equipment. g) Properly dispose of discarded containers of fuels and other chemicals. h) Prior to shipment remove the most volatile elements, including flammable natural gas liquids, as feasible. i) Identify and implement more stringent tank car safety standards. j) Improve rail transportation route analysis, and modification of routes based on that analysis. k) Use the best available inspection equipment and protocols and implement positive train control. l) Reduce train car speeds to 40 miles per hour when passing through urbanized areas of any size. m) Limit storage of crude oil tank cars in urbanized areas of any size and provide appropriate security in storage yards for all shipments. n) Notify in advance county and city emergency operations offices of all crude oil shipments, including a contact number that can provide real-time information in the event of an oil train derailment or accident. o) Report quarterly hazardous commodity flow information, including classification and characterization of materials being transported, to all first response agencies (49 Code Fed. Regs. 15.5) along the mainline rail routes used by trains carrying crude oil identified. p) Fund training and outfitting emergency response crews that includes the cost of backfilling personnel while in training. q) Undertake annual emergency responses scenario/field based training including Emergency Operations Center Training activations with local emergency response agencies.	
Impact HAZ-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment **PMM HAZ-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce hazards related to the reasonably foreseeable upsets and accidents involving the release of hazardous materials, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:	**Not Applicable.** The Project does not include the shipment of flammable liquids and other hazardous materials and does not include any rail transportation. Thus, incorporation of this mitigation measure is not applicable.

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Impacts and Mitigation Measure	Applicability to the Project
Require implementation of safety standards regarding transport of hazardous materials, including but not limited to the following: a) Removal of the most volatile elements, including flammable natural gas liquids, prior to shipment; b) More stringent tank car safety standards; c) Improved rail transportation route analysis, and modification of routes based on that analysis; d) Utilization of the best available inspection equipment and protocols, and implementation of positive train control; e) Reduced train car speeds to 40 miles per hour when passing through urbanized areas of any size; f) Limitations on storage of hazardous materials tank cars in urbanized areas of any size and provide appropriate security in storage yards for all shipments; g) Advance notification to county and city emergency operations offices of all crude oil and hazardous materials shipments, including a contact number that can provide real-time information in the event of an oil train derailment or accident; h) Quarterly hazardous commodity flow information, including classification and characterization of materials being transported, to all first response agencies (49 Code Fed. Regs. 15.5) along the mainline rail routes used by trains carrying hazardous materials.	
Impact HAZ-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school **PMM HAZ-3:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to the release of hazardous materials within one-quarter mile of schools, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Where the construction and operation of projects involves the transport of hazardous materials, avoid transport of such materials within one-quarter mile of schools, when school is in session, wherever feasible.	**Incorporated through regulatory compliance.** Equitas Academy #3 Elementary Charter School is located within 0.25 miles of the Project Site. However, as discussed previously, the Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. Project construction would involve the temporary transport, use, and disposal of potentially hazardous materials. These materials can include paints, adhesives, surface coatings, cleaning agents, fuels, and oils. All such materials would be transported, used, and disposed of in conformance with all applicable regulatory requirements, thereby eliminating the risk of potentially significant hazards. In addition, Project operation does not involve the routine transport, use, or disposal of potentially hazardous materials. Any potentially hazardous materials used would be similar to any other urban residential development, and may include cleaning solvents, paints, and pesticides for landscaping.

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Impacts and Mitigation Measure	Applicability to the Project
b) Where it is not feasible to avoid transport of hazardous materials, within one-quarter mile of schools on local streets, provide notifications of the anticipated schedule of transport of such materials.	These potentially hazardous materials would be in and stored in accordance with regulatory requirements and manufacturers' instructions. Furthermore, the Project would adhere to regulatory requirements concerning source hazardous waste reduction measures and all applicable City ordinances, including the following: • All potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable federal, State, and local laws. • During subsurface excavation activities, including borings, trenching and grading, OSHA worker safety measures shall be implemented as required to preclude any exposure of workers to unsafe levels of soil-gases, including, but not limited to, methane. Thus, application of this mitigation measure is not required due to regulatory compliance.
Impact HAZ-4 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment **PMM HAZ-4:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to projects that are located on a site which is included on the Cortese List, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) For any listed sites or sites that have the potential for residual hazardous materials as a result of historic land uses, complete a Phase I Environmental Site Assessment, including a review and consideration of data from all known databases of contaminated sites, during the process of planning, environmental clearance, and construction for projects. b) Where warranted due to the known presence of contaminated materials, submit to the appropriate agency responsible for hazardous materials/wastes oversight a Phase II Environmental Site Assessment report if warranted by a Phase I report for the project site. The reports	**Not applicable.** The relevant component of this mitigation measure has already been implemented for the Project. The Project Applicant has prepared a Phase I ESA for the Project Site, which concluded that there was no revealed evidence of any Recognized Environmental Conditions in connection with the property and no further environmental investigation is warranted for the subject site. As part of the Phase I ESA (refer to Appendix F) prepared for the Project Site, regulatory databases such as those required by California Government Code Section 65962.5 were reviewed for the Project Site and properties within the standard search radii. The databases searched as a result of Government Code Section 65962.5 are known as the "Cortese List" and include EnviroStor, GeoTracker, and other lists compiled by the California Environmental Protection Agency. No hazardous materials that may pose a risk at or to the Project Site were listed in the databases, and the Project Site is not identified as a hazardous materials site. As a result, construction and operation of the Project would not pose an environmental hazard to surrounding sensitive uses or the environment. Thus, application of this mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
should make recommendations for remedial action, if appropriate, and be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer. c) Implement the recommendations provided in the Phase II Environmental Site Assessment report, where such a report was determined to be necessary for the construction or operation of the project, for remedial action. d) Submit a copy of all applicable documentation required by local, state, and federal environmental regulatory agencies, including but not limited to: permit applications, Phase I and II Environmental Site Assessments, human health and ecological risk assessments, remedial action plans, risk management plans, soil management plans, and groundwater management plans. e) Conduct soil sampling and chemical analyses of samples, consistent with the protocols established by the U.S. EPA to determine the extent of potential contamination beneath all underground storage tanks (USTs), elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition or construction activities would potentially affect a particular development or building. f) Consult with the appropriate local, state, and federal environmental regulatory agencies to ensure sufficient minimization of risk to human health and environmental resources, both during and after construction, posed by soil contamination, groundwater contamination, or other surface hazards including, but not limited to, underground storage tanks, fuel distribution lines, waste pits and sumps. g) Obtain and submit written evidence of approval for any remedial action if required by a local, state, or federal environmental regulatory agency. h) Cease work if soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums, or other hazardous materials or wastes are encountered), in the vicinity of the suspect material. Secure the area as necessary and take all appropriate measures to protect human health and the environment, including but not limited to, notification of regulatory agencies and identification of the nature and extent of contamination. Stop work in the areas affected until the measures have been implemented	

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Impacts and Mitigation Measure	Applicability to the Project
consistent with the guidance of the appropriate regulatory oversight authority. i) Soil generated by construction activities should be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Complete sampling and handling and transport procedures for reuse or disposal, in accordance with applicable local, state and federal laws and policies. j) Groundwater pumped from the subsurface should be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Utilize engineering controls, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building. k) As needed and appropriate, prior to issuance of any demolition, grading, or building permit, submit for review and approval by the Lead Agency (or other appropriate government agency) written verification that the appropriate federal, state and/or local oversight authorities, including but not limited to the Regional Water Quality Control Board (RWQCB), have granted all required clearances and confirmed that the all applicable standards, regulations, and conditions have been met for previous contamination at the site. l) Develop, train, and implement appropriate worker awareness and protective measures to assure that worker and public exposure is minimized to an acceptable level and to prevent any further environmental contamination as a result of construction. m) If asbestos-containing materials (ACM) are found to be present in building materials to be removed, submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health and Safety Code Section 25915- 25919.7; and other local regulations. n) Where projects include the demolitions or modification of buildings constructed prior to 1978, complete an assessment for the potential presence or lack thereof of ACM, lead based paint, and any other building	

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Impacts and Mitigation Measure	Applicability to the Project
materials or stored materials classified as hazardous waste by state or federal law. o) Where the remediation of lead-based paint has been determined to be required, provide specifications to the appropriate agency, signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: California Occupational Safety and Health Administration's (Cal OSHA's) Construction Lead Standard, Title 8 California Code of Regulations (CCR) Section 1532.1 and Department of Health Services (DHS) Regulation 17 CCR Sections 35001–36100, as may be amended. If other materials classified as hazardous waste by state or federal law are present, the project sponsor should submit written confirmation to the appropriate local agency that all state and federal laws and regulations should be followed when profiling, handling, treating, transporting, and/or disposing of such materials.	
Impact HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area See PMM NOISE-1, below.	**Not applicable.** The Project Site is not located within two miles of a public airport or public use airport. The closest airport is the Santa Monica Airport, located approximately 13 miles to the southwest. Thus, incorporation of this mitigation measure is not applicable.
Impact HAZ-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan **PMM HAZ-5:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects which may impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Continue to coordinate locally and regionally based on ongoing review and integration of projected transportation and circulation conditions.	**Incorporated through regulatory compliance.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. Specifically, the Los Angeles Fire Department (LAFD) would require that the Project Applicant submit an emergency response plan to the LAFD as part of LAFD's review of the Project plans as part of the standard building permit review process per LAMC Section 57.118. Moreover, the Project does not propose permanent alterations to vehicular circulation routes and patterns or impede public access or travel upon public rights-of-way. Furthermore, no full road closures are anticipated during construction of the Project. Thus, incorporation of this mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
b) Develop new methods of conveying projected and real time information to citizens using emerging electronic communication tools including social media and cellular networks; c) Continue to evaluate lifeline routes for movement of emergency supplies and evacuation.	
Impact HAZ-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires See Impact WF-2, below.	**Not applicable.** See discussion of the applicability of PMM WF-1, below.
HYDROLOGY AND WATER QUALITY	
Impact HYD-1 Potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality **PMM HYD-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects from violation of any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Complete, and have approved, a Stormwater Pollution Prevention Plan (SWPPP) prior to initiation of construction. b) Implement Best Management Practices to reduce the peak stormwater runoff from the project site to the maximum extent practicable. c) Comply with the Caltrans storm water discharge permit as applicable; and identify and implement Best Management Practices to manage site erosion, wash water runoff, and spill control. d) Complete, and have approved, a Standard Urban Stormwater Management Plan, prior to occupancy of residential or commercial structures. e) Ensure adequate capacity of the surrounding stormwater system to support stormwater runoff from new or rehabilitated structures or buildings. f) Prior to construction within an area subject to Section 404 of the Clean Water Act, obtain all required permit approvals and certifications for construction within the vicinity of a watercourse:	**Incorporated through regulatory compliance.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. The Project would be required to comply with existing regulatory requirements pertaining to water quality standards and waste discharge requirements during construction and operation, as governed by the Los Angeles Regional Water Quality Control Board (LARWQCB) and the City. The Project would comply with LAMC Chapter IX, Division 70, which addresses erosion control during grading, excavations, and fills. Project construction activities would require grading, excavation, and foundation permits or approvals from the City, which would include requirements and standards designed to limit erosion. The Project would also be designed to comply with the City's Low Impact Development (LID) Ordinance. Prior to the issuance of grading permits, the Applicant would submit a LID Plan to the City's Bureau of Sanitation (LASAN) Watershed Protection Division for review and approval. The LID Plan shall be prepared consistent with the requirements of the Development Best Management Practices Handbook. The Project would be subject to the City's Stormwater and Urban Runoff Pollution Control regulations (Ordinance No. 172,176 and No. 173,494) to ensure pollutant loads from the Project Site would be minimized for downstream receiving waters. Compliance with the City's discharge requirements would ensure that construction stormwater runoff would not violate water quality and/or discharge requirements and minimize soil

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Impacts and Mitigation Measure	Applicability to the Project
g) Where feasible, restore or expand riparian areas such that there is no net loss of impervious surface as a result of the project. h) Install structural water quality control features, such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff where required by applicable urban storm water runoff discharge permits, on new facilities. i) Provide operational best management practices for street cleaning, litter control, and catch basin cleaning are implemented to prevent water quality degradation in compliance with applicable storm water runoff discharge permits; and ensure treatment controls are in place as early as possible, such as during the acquisition process for rights-of-way, not just later during the facilities design and construction phase. j) Comply with applicable municipal separate storm sewer system discharge permits as well as Caltrans' storm water discharge permit including long-term sediment control and drainage of roadway runoff. k) Incorporate as appropriate treatment and control features such as detention basins, infiltration strips, and porous paving, other features to control surface runoff and facilitate groundwater recharge into the design of new transportation projects early on in the process to ensure that adequate acreage and elevation contours are provided during the right-of-way acquisition process. l) Upgrade stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities, including expansion and restoration of wetlands and riparian buffer areas. System designs shall be completed to eliminate increases in peak flow rates from current levels. m) Encourage Low Impact Development (LID) and incorporation of natural spaces that reduce, treat, infiltrate and manage stormwater runoff flows in all new developments, where practical and feasible.	erosion and sedimentation from entering the storm drains during the construction period. During operation the Project would be required to comply with the City's LID Ordinance. The LID Ordinance applies to all development and redevelopment in the City that requires replace or creates more than 500 square feet of impervious area. LID Plans are required to include a site design approach and BMPs that address runoff and pollution at the source. Further, to comply with LID Ordinance the Project would be required to capture and treat the runoff volume produced by the 85th percentile storm event in accordance with established stormwater treatment priorities. Compliance with the LID Ordinance would reduce the amount of surface water runoff leaving the Project Site as compared to the current conditions. Compliance with the LID Plan and Stormwater and Urban Runoff Pollution Control Ordinance, including the implementation of BMPs, would ensure that operation of the Project would not violate water quality standard and discharge requirements or otherwise substantially degrade water quality. Consistent with the City's Stormwater and Urban Runoff Pollution Control regulations (Ordinance No. 181,899 and No. 183,833), the Project would be required to adhere to City discharge requirements and would implement BMPs meant to reduce stormwater pollution during demolition, grading, and construction activities. Thus, incorporation of this mitigation measure is not required due to regulatory compliance.
Impact HYD-2 Potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin **PMM HYD-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can	**Not applicable.** The Project Site is completely developed with impervious surfaces. Storm water that encounters the Project Site flows to the City's existing storm drain system and does not reach groundwater levels. Thus, the Project Site is not a source of groundwater recharge. As such, the Project would not decrease or interfere with groundwater.

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Impacts and Mitigation Measure	Applicability to the Project
and should consider mitigation measures to reduce substantial adverse effects from violation of any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Avoid designs that require continual dewatering where feasible. For projects requiring continual dewatering facilities, implement monitoring systems and long-term administrative procedures to ensure proper water management that prevents degrading of surface water and minimizes adverse impacts on groundwater for the life of the project, Construction designs shall comply with appropriate building codes and standard practices including the Uniform Building Code. b) Maximize, where practical and feasible, permeable surface area in existing urbanized areas to protect water quality, reduce flooding, allow for groundwater recharge, and preserve wildlife habitat. Minimize new impervious surfaces, including the use of in-lieu fees and off-site mitigation. c) Avoid construction and siting on groundwater recharge areas, to prevent conversion of those areas to impervious surface. d) Reduce hardscape to the extent feasible to facilitate groundwater recharge as appropriate.	Thus, incorporation of this mitigation measure is not required.
Impact HYD-3a Substantially alter the existing drainage pattern of the site or area, including through the alteration of course of a stream or river through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on-or off-site See PMM HYD-1, above.	**Not applicable.** See discussion of the applicability of PMM HYD-1, above.
Impact HYD-3b Substantially alter the existing drainage pattern of the site or area, including through the alteration of course of a stream or river through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of flooding on- or off-site See PMM HYD-1 and PMM HYD-2, above.	**Not applicable.** See discussion of the applicability of PMM HYD-1 and PMM HYD-2, above.
Impact HYD-3c Substantially alter the existing drainage pattern of the site or area, including through the alteration of course of a stream or river through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or	**Not applicable.** See discussion of the applicability of PMM HYD-1 and PMM HYD-2, above.

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Impacts and Mitigation Measure	Applicability to the Project
planned stormwater drainage systems or provide substantial additional sources of polluted runoff See PMM HYD-1 and PMM HYD-2, above.	
Impact HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation **PMM HYD-4:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures capable of avoiding or reducing the potential impacts of locating structures that would impede or redirect flood flows, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Ensure that all roadbeds for new highway and rail facilities be elevated at least one foot above the 100-year base flood elevation. Since alluvial fan flooding is not often identified on FEMA flood maps, the risk of alluvial fan flooding should be evaluated and projects should be sited to avoid alluvial fan flooding. Delineation of floodplains and alluvial fan boundaries should attempt to account for future hydrologic changes caused by global climate change.	**Not applicable.** The Project Site has a very low potential for inundation by seiche, tsunami, or mudflow. The Project Site is located approximately 12 miles away from the Pacific Ocean, with no nearby major waterbodies. Therefore, risks associated with seiches or tsunamis at the Project Site would be considered extremely low. In addition, the Project Site is located in an urbanized portion of the City and is relatively flat, which limits the potential for inundation by mudflow. Thus, the potential for inundation by seiche, tsunami, or mudflow is considered low. Thus, incorporation of this mitigation measure is not required.
Impact HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan See PMM HYD-2, above.	**Not applicable.** See discussion of the applicability of PMM HYD-2, above.
LAND USE AND PLANNING	
Impact LU-1 Potential for the Plan to physically divide an established community **PMM LU-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects that physically divide a community, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Facilitate good design for land use projects that build upon and improve existing circulation patterns	**Not applicable.** The Project does not include the development of new roadway facilities and would not otherwise physically divide a community. Thus, incorporation of this mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
b) Encourage implementing agencies to orient transportation projects to minimize impacts on existing communities by: -- Selecting alignments within or adjacent to existing public rights of way. -- Design sections above or below-grade to maintain viable vehicular, cycling, and pedestrian connections between portions of communities where existing connections are disrupted by the transportation project. -- Wherever feasible incorporate direct crossings, overcrossings, or under crossings at regular intervals for multiple modes of travel (e.g., pedestrians, bicyclists, vehicles). c) Where it has been determined that it is infeasible to avoid creating a barrier in an established community, consider other measures to reduce impacts, including but not limited to: -- Alignment shifts to minimize the area affected. -- Reduction of the proposed right-of-way take to minimize the overall area of impact. -- Provisions for bicycle, pedestrian, and vehicle access across improved roadways.	
Impact LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect **PMM LU-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects that physically divide a community, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) When an inconsistency with the adopted general plan policy or land use regulation (adopted for the purpose of avoiding or mitigating an impact) is identified modify the transportation or land use project to eliminate the conflict; or, determine if the environmental, social, economic, and engineering benefits of the project warrant an amendment to the general plan or land use regulation.	**Incorporated through regulatory compliance.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. The Project would comply with existing regulations that have been identified and are required by the City as the Project is consistent with applicable regional and local land use plans, policies, and regulations. The Project Site is zoned C2-1 and R4-1 and is located within the Westlake Community Plan area with a land use designations of Highway Oriented Commercial and High Medium Residential. The Project Site is also located within an HQTA and a Transit Priority Area. Pursuant to LAMC Section 12.22 A.31 and the City's adopted TOC Guidelines, the Project is seeking base TOC incentives to allow the proposed density floor area, and parking, and is seeking additional TOC incentives to allow the proposed setbacks, side yards, and averaging of FAR, density, open space, and access for the site. The Project Applicant is also requesting approval of a Vesting Tentative Tract Map, pursuant to LAMC Section 17.15. With approval of these requests, the Project will fully comply with all applicable zoning regulations. Also,

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Impacts and Mitigation Measure	Applicability to the Project
	the Project would be consistent with applicable objectives and policies set forth in the City's planning and land use documents, including the General Plan Framework Element, General Plan Housing Element, Wilshire Community Plan, Planning and Zoning Code, and the Los Angeles Green Building Code. Therefore, the Project would not result in a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project. Thus, incorporation of this mitigation measure is not required.
MINERAL RESOURCES	
Impact MIN-1 Potential to result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state **PMM MIN-1**: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce the use of mineral resources that could be of value to the region, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Provide for the efficient use of known aggregate and mineral resources or locally important mineral resource recovery sites, by ensuring that the consumptive use of aggregate resources is minimized and that access to recoverable sources of aggregate is not precluded, as a result of construction, operation and maintenance of projects. b) Where avoidance is infeasible, minimize impacts to the efficient and effective use of recoverable sources of aggregate through measures that have been identified in county and city general plans, or other comparable measures such as: 1) Recycle and reuse building materials resulting from demolition, particularly aggregate resources, to the maximum extent practicable. 2) Identify and use building materials, particularly aggregate materials, resulting from demolition at other construction sites in the SCAG region, or within a reasonable hauling distance of the project site.	**Not applicable.** The Project Site is not located within the Los Angeles Downtown Oil Field, a Mineral Resource Zone 2 (MRZ-2) Area, an Oil Drilling/Surface Mining Supplemental Use District, or an Oil Field/Drilling Area.[1] Neither of the suggested mitigation measures is applicable as there are no known aggregate and mineral sources or locally important mineral resource recovery sites on or adjacent to the Project Site. Thus, incorporation of this mitigation measure is not required.

[1] *ZIMAS, City of Los Angeles, Parcel Profile Report, August 27, 2020*

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Impacts and Mitigation Measure	Applicability to the Project
3) Design transportation network improvements in a manner (such as buffer zones or the use of screening) that does not preclude adjacent or nearby extraction of known mineral and aggregate resources following completion of the improvement and during long-term operations. 4) Avoid or reduce impacts on known aggregate and mineral resources and mineral resource recovery sites through the evaluation and selection of project sites and design features (e.g., buffers) that minimize impacts on land suitable for aggregate and mineral resource extraction by maintaining portions of MRZ-2 areas in open space or other general plan land use categories and zoning that allow for mining of mineral resources.	
Impact MIN-2 Potential to result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan See PMM MIN-1, above.	**Not applicable.** See discussion of the applicability of PMM MIN-1, above.
NOISE	
Impact NOISE-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies **PMM NOISE-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects that physically divide a community, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Install temporary noise barriers during construction. b) Include permanent noise barriers and sound-attenuating features as part of the project design. Barriers could be in the form of outdoor barriers, sound walls, buildings, or earth berms to attenuate noise at adjacent sensitive uses. c) Schedule construction activities consistent with the allowable hours pursuant to applicable general plan noise element or noise ordinance	**Mitigation Measure Applied.** The City has determined to apply this mitigation measure to the Project.

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Impacts and Mitigation Measure	Applicability to the Project
d) Post procedures and phone numbers at the construction site for notifying the Lead Agency staff, local Police Department, and construction contractor (during regular construction hours and off hours), along with permitted construction days and hours, complaint procedures, and who to notify in the event of a problem. e) Notify neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of anticipated times when noise levels are expected to exceed limits established in the noise element of the general plan or noise ordinance. f) Designate an on-site construction complaint and enforcement manager for the project. g) Ensure that construction equipment are properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds silencers, wraps). All intake and exhaust ports on power equipment shall be muffled or shielded. h) Use hydraulically or electrically powered tools (e.g., jack hammers, pavement breakers, and rock drills) for project construction to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust should be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used, if such jackets are commercially available, and this could achieve a further reduction of 5 dBA. Quieter procedures should be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. i) Where feasible, design projects so that they are depressed below the grade of the existing noise-sensitive receptor, creating an effective barrier between the roadway and sensitive receptors. j) Where feasible, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not provide sufficient noise reduction. k) Using rubberized asphalt or "quiet pavement" to reduce road noise for new roadway segments, roadways in which widening or other modifications require re-pavement, or normal reconstruction of roadways where re-pavement is planned	

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Impacts and Mitigation Measure	Applicability to the Project
l) Projects that require pile driving or other construction noise above 90 dBA in proximity to sensitive receptors, should reduce potential pier drilling, pile driving and/or other extreme noise generating construction impacts greater than 90 dBA; a set of site-specific noise attenuation measures should be completed under the supervision of a qualified acoustical consultant. m) Use land use planning measures, such as zoning, restrictions on development, site design, and buffers to ensure that future development is compatible with adjacent transportation facilities and land uses; n) Monitor the effectiveness of noise reduction measures by taking noise measurements and installing adaptive mitigation measures to achieve the standards for ambient noise levels established by the noise element of the general plan or noise ordinance. o) Use equipment and trucks with the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible) for project construction. p) Stationary noise sources can and should be located as far from adjacent sensitive receptors as possible and they should be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the Lead Agency (or other appropriate government agency) to provide equivalent noise reduction. q) Use of portable barriers in the vicinity of sensitive receptors during construction. r) Implement noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings (for instance by the use of sound blankets), and implement if such measures are feasible and would noticeably reduce noise impacts. s) Monitor the effectiveness of noise attenuation measures by taking noise measurements. t) Maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other new noise-generating facilities. u) Construct sound reducing barriers between noise sources and noise-sensitive land uses. v) Stationary noise sources can and should be located as far from adjacent sensitive receptors as possible and they should be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other	

Table G-1
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Impacts and Mitigation Measure	Applicability to the Project
measures as determined by the Lead Agency (or other appropriate government agency) to provide equivalent noise reduction. w) Use techniques such as grade separation, buffer zones, landscaped berms, dense plantings, sound walls, reduced-noise paving materials, and traffic calming measures. x) Locate transit-related passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations away from sensitive receptors to the maximum extent feasible.	
Impact NOISE-2 Generation of excessive groundborne vibration or groundborne noise levels **PMM NOISE-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) For projects that require pile driving or other construction techniques that result in excessive vibration, such as blasting, determine the potential vibration impacts to the structural integrity of the adjacent buildings within 50 feet of pile driving locations. b) For projects that require pile driving or other construction techniques that result in excessive vibration, such as blasting, determine the threshold levels of vibration and cracking that could damage adjacent historic or other structure, and design means and construction methods to not exceed the thresholds. c) For projects where pile driving would be necessary for construction due to geological conditions, utilize quiet pile driving techniques such as predrilling the piles to the maximum feasible depth, where feasible. Predrilling pile holes will reduce the number of blows required to completely seat the pile and will concentrate the pile driving activity closer to the ground where pile driving noise can be shielded more effectively by a noise barrier/curtain. d) Restrict construction activities to permitted hours in accordance with local jurisdiction regulation.	**Mitigation Measure Applied.** The City has determined to apply this mitigation measure to the Project.

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Impacts and Mitigation Measure	Applicability to the Project
e) Properly maintain construction equipment and outfit construction equipment with the best available noise suppression devices (e.g., mufflers, silences, wraps). f) Prohibit idling of construction equipment for extended periods of time in the vicinity of sensitive receptors.	
Impact NOISE-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels See PMM NOISE-1, above	**No mitigation applies.** See discussion of the applicability of PMM NOISE -1, above. Also, the Project Site is not located within two miles of an airport.
POPULATION AND HOUSING	
Impact POP-1 Induce a substantial unplanned population growth to areas of the region either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., by extending roads and other infrastructure) No project-level mitigation measures were identified for this issue.	**Not applicable.** As discussed above under LU-1 and LU-2, no mitigation applies, as the Project is consistent with the goals and policies of regional and local plans and would not induce new growth in the vicinity of the Project Site. Accordingly, the Project's use and development envelope are consistent with SCAG's 2020-2045 RTP/SCS, the Los Angeles General Plan, the City's zoning code, and City TOC program. The Project includes the construction of 145 multi-family residential units on the Project Site (including 15 units set aside for Extremely Low Income households) and 2,000 square feet of neighborhood-serving commercial uses. This increase in housing would not be considered a substantial increase in housing for the area as the addition of 145 new multi-family residential units is within the anticipated housing increases based on SCAG projections for housing. The types of jobs provided as part of the Project could be filled from the existing workforce in the City and would not cause people from outside of the City to relocate. As such, housing and population growth associated with the Project would not constitute substantial unplanned growth. Due to its consistency with these regional and local plans and policies, the Project would not induce significant growth or accelerate development in an undeveloped area that exceeds projected/planned levels. Furthermore, the Project would respond to the general need for more housing in the region, which would help accommodate the growth forecast for the City.

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Impacts and Mitigation Measure	Applicability to the Project
Impact POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **PMM POP-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce the displacement of existing housing, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses. Use an iterative design and impact analysis where impacts to homes or businesses are involved to minimize the potential of impacts on housing and displacement of people. b) Prioritize the use existing ROWs, wherever feasible. c) Develop a construction schedule that minimizes potential neighborhood deterioration from protracted waiting periods between right-of-way acquisition and construction. d) Review capacities of available urban infrastructure and augment capacities as needed to accommodate demand in locations where growth is desirable to the local lead Agency and encouraged by the SCS (primarily TPAs, where applicable). e) When General Plans and other local land use regulations are amended or updated, use the most recent growth projections and RHNA allocation plan.	**Not applicable.** The Project Site is currently developed with a parking lot and would not displace any people or housing. Thus, incorporation of this mitigation measure is not required.
PUBLIC SERVICES	
Impact PSF-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives See PMM PSP-1, below.	**Not applicable.** See discussion of the applicability of PMM PSP-1, below. Also, the Project would be required to comply with fire protection design standards, as necessary, per the California Building Code, California Fire Code, LAMC, and the Los Angeles Fire Department (LAFD), to ensure adequate fire protection. Key components of the regulatory requirements (from the CBC, California Fire Code, and LAMC) that would be implemented as part of the Project pursuant to LAFD review and guidance include the following:

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Impacts and Mitigation Measure	Applicability to the Project
	• Building Design: Fire resistant doors and materials, as well as walkways, stairwell and elevator systems (including emergency and fire control elevators) that meet Code requirements. • Fire Safety Features: Installation of automatic sprinkler systems, smoke detectors, and appropriate signage and internal exit routes to facilitate a building evacuation if necessary. Installation of a fire alarm system, building emergency communication system, and smoke control system. • Emergency Safety Provisions: Implementation of an Emergency Plan in accordance with LAMC Section 57.33.19. The Emergency Plan would establish dedicated personnel and emergency procedures to assist the LAFD during an emergency incident. • LAFD Access: Access for LAFD apparatus and personnel would be provided to the Project Site in accordance with LAFD requirements, inclusive of standards regarding fire lane widths and weight capacities needed to support fire fighting vehicles. In addition, the City requires that plans for building construction, fire flow requirements, fire protection devices (e.g. sprinklers and alarms), fire hydrants and spacing, and fire access (including ingress/egress), turning radii, driveway width, and grading would be prepared for review and approval by the LAFD. The Project is not expected to result in a substantial increase in demand for additional fire protection services that would exceed the capability of the LAFD, such that it would require the construction of a new fire station. Further, even if a new fire station, or the expansion of an existing station, was determined to be warranted by LAFD, the Project area is highly developed, and the site of a new fire station or expansion of an existing station would likely be on an infill lot that would likely be less than one acre in size and thus, would be eligible for a Sustainable Communities Project Exemption.
Impact PSP-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives	**Not applicable.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. In accordance with existing City regulations, the Project would implement appropriate temporary security features during construction (such as chain link fencing and security lighting). Further, during operation, the Project would provide perimeter lighting to provide

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Impacts and Mitigation Measure	Applicability to the Project
PMM PSP-1: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects of constructing new emergency response facilities, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: • Coordinate with emergency response agencies to ensure that there are adequate governmental facilities to maintain acceptable service ratios, response times or other performance objectives for emergency response services and that any required additional construction of buildings is incorporated in to the project description. • Where current levels of services at the project site are found to be inadequate, provide fair share contributions towards infrastructure improvements, as appropriate and applicable, to mitigate identified CEQA impacts. • Project sponsors can and should develop traffic control plans for individual projects. Traffic control plans should include information on lane closures and the anticipated flow of traffic during the construction period. The basic objective of each traffic control plan (TCP) is to permit the contractor to work within the public right of way efficiently and effectively while maintaining a safe, uniform flow of traffic. The construction work and the public traveling through the work zone in vehicles, bicycles or as pedestrians must be given equal consideration when developing a traffic control plan.	increased visibility and security, parking access control, and residential units access control. These measures would provide defensible spaces designed to reduce opportunity crime and ensure safety and security. Thus, the Project would not generate a demand for additional police protection services that could exceed LAPD's capability to serve the Project Site. Therefore, the Project would not require the addition of a new police facility or the expansion, consolidation, or relocation of an existing police station to maintain service ratios.
Impact PSS-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered education facilities, need for new or physically altered education facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives **PMM PSS-1**: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects of constructing new or physically altered school facilities, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:	**Not applicable.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. The Project Applicant would be required to pay developer fees to the Los Angeles Unified School District (LAUSD) as required by law and which considered full and complete mitigation, pursuant to Senate Bill (SB) 50 and California Government Code Section 65995.

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Impacts and Mitigation Measure	Applicability to the Project
a) Where construction or expansion of school facilities is required to meet public school service ratios, require school district fees, as applicable.	
Impact PSL-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives **PMM PSL-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects of construction of new or altered library facilities, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Where construction or expansion of library facilities is required to meet public library service ratios, require library fees, as appropriate and applicable, to mitigate identified CEQA impacts.	**Not applicable.** The Project Site is located in an urbanized area of the City that is already served by several existing libraries, including: Pico Union Branch Library, Los Angeles Central Library, Felipe De Neve Branch Library, and Pio Pico – Koreatown Branch Library. While the Project's residential population could result in an increased demand for library services, the Project would not create the need for new or altered library facilities. Thus, incorporation of this mitigation measure is not required.
RECREATION	
Impact REC-1 Potential to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated **PMM REC-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects on the use of existing neighborhood and regional parks or other recreational facilities, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Prior to the issuance of permits, where projects require the construction or expansion of recreational facilities or the payment of equivalent Quimby fees, consider increasing the accessibility to natural areas and lands for outdoor recreation from the proposed project area, in coordination with local and regional open space planning and/or responsible management agencies.	**Not applicable.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. Specifically, any demand for City recreational facilities by Project residents would be minimized through compliance with LAMC Section 12.21 (G), pursuant to which the Project would include on-site open space, which would reduce demand placed on local parks and recreational facilities by Project residents. Additionally, the Project Applicant would be required to pay an in-lieu fee to the City for the purpose of developing park and recreational facilities, in accordance with Ordinance 184,505 (Parks Dedication and Fee Update). Therefore, with compliance with existing regulatory requirements, the Project would not require the addition of a new park or require the alteration or addition to an existing park or open space facility and would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

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Impacts and Mitigation Measure	Applicability to the Project
b) Prior to the issuance of permits, where projects require the construction or expansion of recreational facilities or the payment of equivalent Quimby fees, encourage patterns of urban development and land use which reduce costs on infrastructure and make better use of existing facilities, using strategies such as: i. Increasing the accessibility to natural areas for outdoor recreation ii. Utilizing "green" development techniques iii. Promoting water-efficient land use and development iv. Encouraging multiple uses, such as the joint use of schools v. Including trail systems and trail segments in General Plan recreation standards.	
Impact REC-2 Result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, or other performance objectives ***Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment*** See PMM REC-1, PMM AQ-2, and PMM NOISE-1, above.	**Not applicable.** See discussion of the applicability of PMM REC-1, PMM AQ-2, and PMM NOISE-1, above.
TRANSPORTATION	
Impact TRA-1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities No mitigation measures required.	**No mitigation applies.** No mitigation measures related to this issue were identified, and no mitigation measures apply to the Project.
Impact TRA-2 Conflict or be inconsistent with CEQA Guidelines section 15064.3(b) **PMM TRA-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to transportation-related impacts, as applicable and feasible. Such	**Not applicable.** A Vehicle Miles Traveled (VMT) analysis was conducted for the Project as part of the *Transportation Assessment*, prepared by Gibson Transportation Consulting, Inc., dated November 2020 (refer to Appendix I). The Project's VMT was assessed, based on LADOT's VMT Calculator tool. The Project Site is located in the Central Area Planning Commission (APC) area, which has an average household VMT of 6.0 per capita. As discussed in the *Transportation Assessment Report*, the Project would have a daily household VMT of 4.0 per capita, and the

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Impacts and Mitigation Measure	Applicability to the Project
measures may include the following or other comparable measures identified by the Lead Agency: • Transportation demand management (TDM) strategies should be incorporated into individual land use and transportation projects and plans, as part of the planning process. Local agencies should incorporate strategies identified in the Federal Highway Administration's publication: Integrating Demand Management into the Transportation Planning Process: A Desk Reference (August 2012) into the planning process (FHWA 2012). For example, the following strategies may be included to encourage use of transit and non-motorized modes of transportation and reduce vehicle miles traveled on the region's roadways: -- include TDM mitigation requirements for new developments; -- incorporate supporting infrastructure for non-motorized modes, such as, bike lanes, secure bike parking, sidewalks, and crosswalks; -- provide incentives to use alternative modes and reduce driving, such as, universal transit passes, road and parking pricing; -- implement parking management programs, such as parking cash-out, priority parking for carpools and vanpools; -- develop TDM-specific performance measures to evaluate project-specific and system-wide performance; -- incorporate TDM performance measures in the decision-making process for identifying transportation investments; -- implement data collection programs for TDM to determine the effectiveness of certain strategies and to measure success over time; and -- set aside funding for TDM initiatives. -- The increase in per capita VMT on facilities experiencing LOS F represents a significant impact compared to existing conditions. To assess whether implementation of these specific mitigation strategies would result in measurable traffic congestion reductions, implementing actions may need to be further refined within the overall parameters of the proposed Plan and matched to local conditions in any subsequent project-level environmental analysis.	Project's VMT would fall below LADOT's threshold for the Central APC. Thus, incorporation of this mitigation measure is not required.

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Impacts and Mitigation Measure	Applicability to the Project
Impact TRA-3 Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) No mitigation measures required.	**Not applicable.** No mitigation measures related to this issue were identified, and no mitigation measures apply to the Project.
Impact TRA-4 Result in inadequate emergency access ***Impact WF-1 Substantially impair an adopted emergency response plan or emergency evacuation plan*** **PMM TRA-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects which may substantially impair implementation of an adopted emergency response plan or emergency evacuation plan, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Prior to construction, project implementation agencies can and should ensure that all necessary local and state road and railroad encroachment permits are obtained. The project implementation agency can and should also comply with all applicable conditions of approval. As deemed necessary by the governing jurisdiction, the road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans can and should include the following requirements: -- Identification of all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow. -- Development of circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. -- Scheduling of truck trips outside of peak morning and evening commute hours. -- Limiting of lane closures during peak hours to the extent possible. -- Usage of haul routes minimizing truck traffic on local roadways to the extent possible.	**Not applicable.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. All ingress/egress associated with the Project would be designed and constructed in conformance to all applicable City Building and Safety Department, Bureau of Engineering, and LAFD standards and requirements for design and construction. Also, prior to issuance of a building permit, the Project Applicant would be required to submit parking and driveway plans to the Bureau of Engineering, LAFD, and LADOT for approval to ensure that the Project complies with code-required emergency access. The Project would not require the closure of any public or private streets and would not impede emergency vehicle access to the Project Site or surrounding area. Prior to issuance of a building permit, the Project Applicant would be required by the City to develop an emergency response plan in consultation with the LAFD. The emergency response plan shall include but not be limited to: mapping of emergency exits, evacuation routes for vehicles and pedestrians, location of nearest hospitals, and fire departments. Through compliance with these City requirement, the Project would not result in inadequate emergency access and would not impair an adopted emergency response plan or emergency evacuation plan.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
-- Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction. -- Installation of traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones. -- Development and implementation of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. The access plans would be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions can and should be asked to identify detours for emergency vehicles, which will then be posted by the contractor. Notify in advance the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures. -- Storage of construction materials only in designated areas. -- Coordination with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary. -- Ensure the rapid repair of transportation infrastructure in the event of an emergency through cooperation among public agencies and by identifying critical infrastructure needs necessary for: a) emergency responders to enter the region, b) evacuation of affected facilities, and c) restoration of utilities. -- Enhance emergency preparedness awareness among public agencies and with the public at large.	
TRIBAL CULTURAL RESOURCES	
Impact TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 that is: ***a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or*** ***b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1***	**Incorporated through conditions of approval.** The Project Site is in an urbanized area of the City, is currently developed, and has been developed with various uses in its history, resulting in disturbance of the upper level of soil at the site. No tribal cultural resources are known to exist at the site. Additionally, the City would require the Project Applicant to comply with the City's Standard Condition of Approval for the Inadvertent Discovery of Unknown Tribal Cultural Resources, which requires the following: • In the event that objects or artifacts that may be tribal cultural resources are encountered during the course of any ground disturbance activities, all such activities shall temporarily cease

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
See PMM CULT-1, above. **PMM TCR-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects on tribal cultural resources, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria; b) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following: protecting the cultural character and integrity of the resource; protecting the traditional use of the resource; and protecting the confidentiality of the resource; c) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places; and protecting the resource.	on the project site until the potential tribal cultural resources are properly assessed and addressed pursuant to the process set forth below: - Upon a discovery of a potential tribal cultural resource, the project Permittee shall immediately stop all ground disturbance activities and contact the following: (1) all California Native American tribes that have informed the City they are traditionally and culturally affiliated with the geographic area of the proposed project; (2) and the Department of City Planning at (213) 978-1454. - If the City determines, pursuant to Public Resources Code Section 21074 (a)(2), that the object or artifact appears to be tribal cultural resource, the City shall provide any effected tribe a reasonable period of time, not less than 14 days, to conduct a site visit and make recommendations to the Project permittee and the City regarding the monitoring of future ground disturbance activities, as well as the treatment and disposition of any discovered tribal cultural resources. - The project Permittee shall implement the tribe's recommendations if a qualified archaeologist, retained by the City and paid for by the project Permittee, reasonably concludes that the tribe's recommendations are reasonable and feasible. - The project Permittee shall submit a tribal cultural resource monitoring plan to the City that includes all recommendations from the City and any effected tribes that have been reviewed and determined by the qualified archaeologist to be reasonable and feasible. The project Permittee shall not be allowed to recommence ground disturbance activities until this plan is approved by the City. - If the project Permittee does not accept a particular recommendation determined to be reasonable and feasible by the qualified archaeologist, the project Permittee may request mediation by a mediator agreed to by the Permittee and the City who has the requisite professional qualifications

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
	and experience to mediate such a dispute. The project Permittee shall pay any costs associated with the mediation. - The project Permittee may recommence ground disturbance activities outside of a specified radius of the discovery site, so long as this radius has been reviewed by the qualified archaeologist and determined to be reasonable and appropriate. - Copies of any subsequent prehistoric archaeological study, tribal cultural resources study or report, detailing the nature of any significant tribal cultural resources, remedial actions taken, and disposition of any significant tribal cultural resources shall be submitted to the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. - Notwithstanding the above, any information determined to be confidential in nature, by the City Attorney's office, shall be excluded from submission to the SCCIC or the general public under the applicable provisions of the California Public Records Act, California Public Resources Code, and shall comply with the City's AB 52 Confidentiality Protocols.
UTILITIES AND SERVICE SYSTEMS	
Impact USSW-1 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals ***Impact USSW-2 Comply with federal, state, and local management and reduction statues and regulations related to solid waste*** **PMM USSW-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce the generation of solid waste, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: Integrate green building measures with CALGreen (California Building Code Title 24) into project design, including but not limited to the following:	**Incorporated through regulatory compliance.** The Project would be required to comply with similar regulations that are equal to or more effective than this mitigation measure. Specifically, at the State level, the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) seeks to improve solid waste disposal management with respect to (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. AB 939 mandates jurisdictions to meet a diversion goal of 25 percent by 1995 and 50 percent by 2000. Pursuant to AB 939, each County is required to prepare and administer a Countywide Integrated Waste Management Plan (ColWMP), pursuant to which landfill disposal needs and capacity are continually evaluated as part of the preparation of the ColWMP Annual Report that examines future landfill disposal needs over the next 15-year planning horizon. The most recent ColWMP 2018 Annual Report for Los Angeles

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
a) Reuse and minimization of construction and demolition (C&D) debris and diversion of C&D waste from landfills to recycling facilities. b) Inclusion of a waste management plan that promotes maximum C&D diversion. c) Source reduction through (1) use of materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed materials, and (5) use of structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings, etc.). d) Reuse of existing structure and shell in renovation projects. e) Development of indoor recycling program and space. f) Discourage the siting of new landfills unless all other waste reduction and prevention actions have been fully explored. If landfill siting or expansion is necessary, site landfills with an adequate landfill-owned, undeveloped land buffer to minimize the potential adverse impacts of the landfill in neighboring communities. g) Discourage exporting of locally generated waste outside of the SCAG region during the construction and implementation of a project. Encourage disposal within the county where the waste originates as much as possible. Promote green technologies for long-distance transport of waste (e.g., clean engines and clean locomotives or electric rail for waste-by-rail disposal systems) and consistency with SCAQMD and Connect SoCal policies can and should be required. h) Encourage waste reduction goals and practices and look for opportunities for voluntary actions to exceed the 80 percent waste diversion target. i) Encourage the development of local markets for waste prevention, reduction, and recycling practices by supporting recycled content and green procurement policies, as well as other waste prevention, reduction and recycling practices. j) Develop ordinances that promote waste prevention and recycling activities such as: requiring waste prevention and recycling efforts at all large events	County states that no solid waste disposal capacity shortfall is anticipated within the next 15 years (i.e., until 2033) under current conditions.[2] The City's Solid Waste Management Policy Plan (CiSWMPP) is a long-range policy plan adopted in 1993 to provide direction for the solid waste management. The objective of the CiSWMPP is to promote source reduction or recycling for a minimum of 50 percent of the City's waste by 2000, or as soon as possible thereafter, and 70 percent of the waste by 2020. The Plan's goal has also been surpassed by the City, which achieved a diversion rate of 76.4 percent in 2012.[3] The City also adopted the Recovering Energy, Natural Resources and Economic Benefit from Waste for Los Angeles (RENEW LA) in 2006, which has the primary objective of achieving a zero waste goal through reducing, reusing, recycling, or converting the resources currently going to disposal. The Project would be required to reduce the total estimated waste output through established City recycling programs and would also be subject to the City's Recycling Space Allocation Ordinance (Ordinance No. 171,687), which establishes requirements for the inclusion of recycling areas or rooms within development projects. In addition, in compliance with existing City standards and regulations, the Project would be required to recycle construction and demolition (C&D) waste to the maximum extent possible pursuant to Ordinance No. 181,519 (Citywide Construction and Demolition Waste Recycling Ordinance) that requires all mixed C&D waste generated within City limits to be taken to City-certified C&D waste processors. Compliance with these regulations would ensure that construction waste is recycled and disposed of properly. Overall, compliance with existing regulations would ensure that the Project's waste disposal needs are reduced and can be sufficiently

[2] *County of Los Angeles Department of Public Works, CoIWMP 2018 Annual Report, December 2019, page 37.*

[3] *LASAN, Recycling, 2020. Available at: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r?_adf.ctrl-state=auguwdldg_5&_afrLoop=1087001437582667O#!., accessed July 7, 2020.*

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
and venues; implementing recycled content procurement programs; and developing opportunities to divert food waste away from landfills and toward food banks and composting facilities. k) Develop and site composting, recycling, and conversion technology facilities that have minimum environmental and health impacts. l) Integrate reuse and recycling into residential industrial, institutional and commercial projects. m) Provide education and publicity about reducing waste and available recycling services. n) Implement or expand city or county-wide recycling and composting programs for residents and businesses. This could include extending the types of recycling services offered (e.g., to include food and green waste recycling) and providing public education and publicity about recycling services.	met by local landfills, thereby achieving consistency with this mitigation measure. Project construction waste would be hauled by permitted haulers and taken only to City-certified construction and demolition (C&D) processing facilities that are monitored for compliance with existing regulations. Project-generated C&D waste would represent a very small portion of the waste disposal capacity in the region. In addition, waste generated by the Project would be subject to State and local recycling and waste diversion strategies and policies including the City's Zero Waste Plan goal of achieving a 90 percent solid waste diversion rate by 2025.
Impact USWW-1 Require or result in the relocation or construction of new or expanded wastewater treatment or storm drainage facilities, the construction or relocation of which could cause significant environmental effects See PMM HYD-1, above. **PMM-USWW-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects on utilities and service systems, particularly for construction of wastewater facilities, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: • During the design and CEQA review of individual future projects, implementing agencies and projects sponsors shall determine whether sufficient wastewater capacity exists for the proposed projects. There CEQA determinations must ensure that the proposed development can be served by its existing or planned treatment capacity. If adequate capacity does not exist, project sponsors shall coordinate with the relevant service provider to ensure that adequate public services and utilities could accommodate the increased demand, and if not, infrastructure improvements for the appropriate public service or utility shall be identified in each project's CEQA documentation. The relevant public service	**Not applicable.** Wastewater treatment for the Project Site is accommodated at the Hyperion Treatment Plant, which has a current available treatment capacity of 260 million gallons per day (mgd) (refer to the *Utility Infrastructure Technical Report: Water, Wastewater, and Energy* prepared by KPFF Consulting Engineers, dated June 2022, in Appendix C). The report estimates that the Project would generate approximately 39,798 gallons of wastewater per day, representing approximately 0.15 percent of the available treatment capacity. Thus, the Hyperion Treatment Plant would have adequate capacity to accommodate the Project's wastewater generation, and relocated or new facilities would not be required. Regarding storm drain facilities, the Project Site is served by the City's existing storm drain system. The Project Site in its existing condition is largely impervious; this would not change a result of the Project. As a result, the amount of runoff from the Project Site as a result of the Project would not alter (either less or more) than existing runoff levels and relocated or new storm drains would not be required. Thus, incorporation of this mitigation measure is not required.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
provider or utility shall be responsible for undertaking project-level review as necessary to provide CEQA clearance for new facilities.	
Impact USWW-2 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments See PMM USWW-1, above	**Not applicable.** See discussion of the applicability of PMM USWW-1, above.
Impact USWS-1 Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects **PMM-USWS-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to ensure sufficient water supplies, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Reduce exterior consumptive uses of water in public areas, and should promote reductions in private homes and businesses, by shifting to drought-tolerant native landscape plantings, using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives b) Promote the availability of drought-resistant landscaping options and provide information on where these can be purchased. Use of reclaimed water especially in median landscaping and hillside landscaping can and should be implemented where feasible. c) Implement water conservation best practices such as low-flow toilets, water-efficient clothes washers, water system audits, and leak detection and repair. d) For projects located in an area with existing reclaimed water conveyance infrastructure and excess reclaimed water capacity, use reclaimed water for non-potable uses, especially landscape irrigation. For projects in a location planned for future reclaimed water service, projects should install dual plumbing systems in anticipation of future use. Large developments could treat wastewater onsite to tertiary standards and use it for non-potable uses onsite.	**Not applicable.** Based on the *Utility Infrastructure Technical Report: Water, Wastewater, and Energy* prepared by KPFF Consulting Engineers, dated June 2022, in Appendix C, water conveyance infrastructure in the vicinity of the Project site includes a 12-inch water main in James M. Wood Boulevard and an 8-inch water main in Beacon Avenue. According to the report, the Project would consume approximately 47,756 gallons of water per day. The Project could be adequately served by the existing infrastructure, and relocation or new infrastructure would not be required. Thus, incorporation of this mitigation measure is not required.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
Impact USWS-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years See PMM USWS-1, above.	**No mitigation applies.** See discussion of the applicability of PMM USWS-1, above.
WILDFIRE	
Impact WF-2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire **Impact HAZ-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires** **PMM WF-1:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to wildfire risk, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) Launch fire prevention education for local cities and counties such that local fire agencies, homeowners, as well as commercial and industrial businesses are aware of potential sources of fire ignition and the related procedures to curb or lessen any activities that might initiate fire ignition. b) Ensure structures in high fire risk areas are built to current state and federal standards which serve to greatly increase the chances the structure will survive a wildfire and also allow for people to shelter-in-place. c) Improve road access for emergency response and evacuation so people can evacuate safely and timely when necessary. d) Improve, and educate regarding, local emergency communications and notifications with residents and businesses. e) Enforce defensible space regulations to keep overgrown and unmanaged vegetation, accumulations of trash and other flammable material away from structures. f) Provide public education about wildfire risk and fire prevention measures, and safety procedures and practices to allow for safe evacuation and/or options to shelter-in-place.	**Not applicable.** The Project Site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Thus, incorporation of this mitigation measure is not required.

Table G-1
Applicability of 2020-2045 RTP/SCS Final EIR Mitigation Measures

Impacts and Mitigation Measure	Applicability to the Project
Impact WF-3 Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment See PMM HAZ-4, above. **PMM WF-2:** In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures to wildfire risk, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency: a) New development or infrastructure activity within very high hazard severity zones or SRAs shall be required to: -- Submit a fire protection plan including the designation of fire watch staff; -- Maintain water and other fire suppression equipment designated solely for firefighting on site for any construction and maintenance activities; -- Locate construction and maintenance equipment in designated "safe areas" such that they do not discharge combustible materials; and -- Designate trained fire watch staff during project construction to reduce risk of fire hazards.	**Not applicable.** The Project Site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Thus, incorporation of this mitigation measure is not required.
Impact WF-4 Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope stability, or drainage changes See PMM WF-1, PMM WF-2, PMM HYD-1 and PMM HAZ-4, above.	**Not applicable.** See discussion of the applicability of PMM WF-1, PMM WF-2, PMM HYD-1 and PMM HAZ-4, above.
Source: SCAG, 2020-2045 RTP/SCS Final EIR, Mitigation Monitoring and Reporting Program, adopted May 2020.	

TRANSPORTATION ASSESSMENT FOR THE 905 BEACON AVENUE RESIDENTIAL PROJECT

LOS ANGELES, CALIFORNIA

NOVEMBER 2020

PREPARED FOR

TRIUMPH PROPERTIES GROUP, LLC

PREPARED BY

Gibson transportation consulting, inc.

TRANSPORTATION ASSESSMENT
FOR THE
905 BEACON AVENUE
RESIDENTIAL PROJECT

LOS ANGELES, CALIFORNIA

November 2020

Prepared for:

TRIUMPH PROPERTIES GROUP, LLC

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Chapter 1
Introduction

This study presents the transportation assessment for the proposed residential project (Project) located at 905 Beacon Avenue (Project Site) in the City of Los Angeles, California (City). The methodology and base assumptions used in the analysis were established in consultation with the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

The Project is a seven-story mixed-use development consisting of 145 residential units and 2,400 square feet (sf) of ground-floor commercial uses. The existing surface parking lot on the site would be removed with the development of the Project. The Project is anticipated to be complete by Year 2023. Parking for the Project would be provided within one at-grade parking level and two subterranean parking levels. The Project would provide vehicular and bicycle parking on-site. Residential access to the Project Site would be provided via one full-access driveway on Beacon Avenue and commercial access would be provided via one full-access driveway on James M. Wood Boulevard.

The conceptual ground floor Project site plan is shown in Figures 1A and 1B.

PROJECT LOCATION AND TRANSPORTATION ANALYSIS STUDY AREA

As shown in Figure 2A, the Project Site, located on the southwest corner of Beacon Avenue & James M. Wood Boulevard, is bounded by James M. Wood Boulevard to the north, Beacon Avenue to the east, and residential uses to the south and commercial uses to the west. Most nearby uses are commercial or residential. The Los Angeles County Metropolitan Transportation Authority (Metro) Red/Purple Line Westlake/MacArthur Park Station is located less than 0.5 miles northwest of the Project Site. The Project consists of seven parcels contained within three

Assessor's Parcel Number (APN): APN 5137-001-034, APN 5137-001-002, and APN 5137-001-003.

The Project Site is located approximately 0.5 miles west of the Harbor Freeway (SR 110), approximately 0.9 miles north of the Santa Monica Freeway (I-10), and approximately 1.5 miles south of the Hollywood Freeway (US 101), all of which provide regional access to and from downtown Los Angeles.

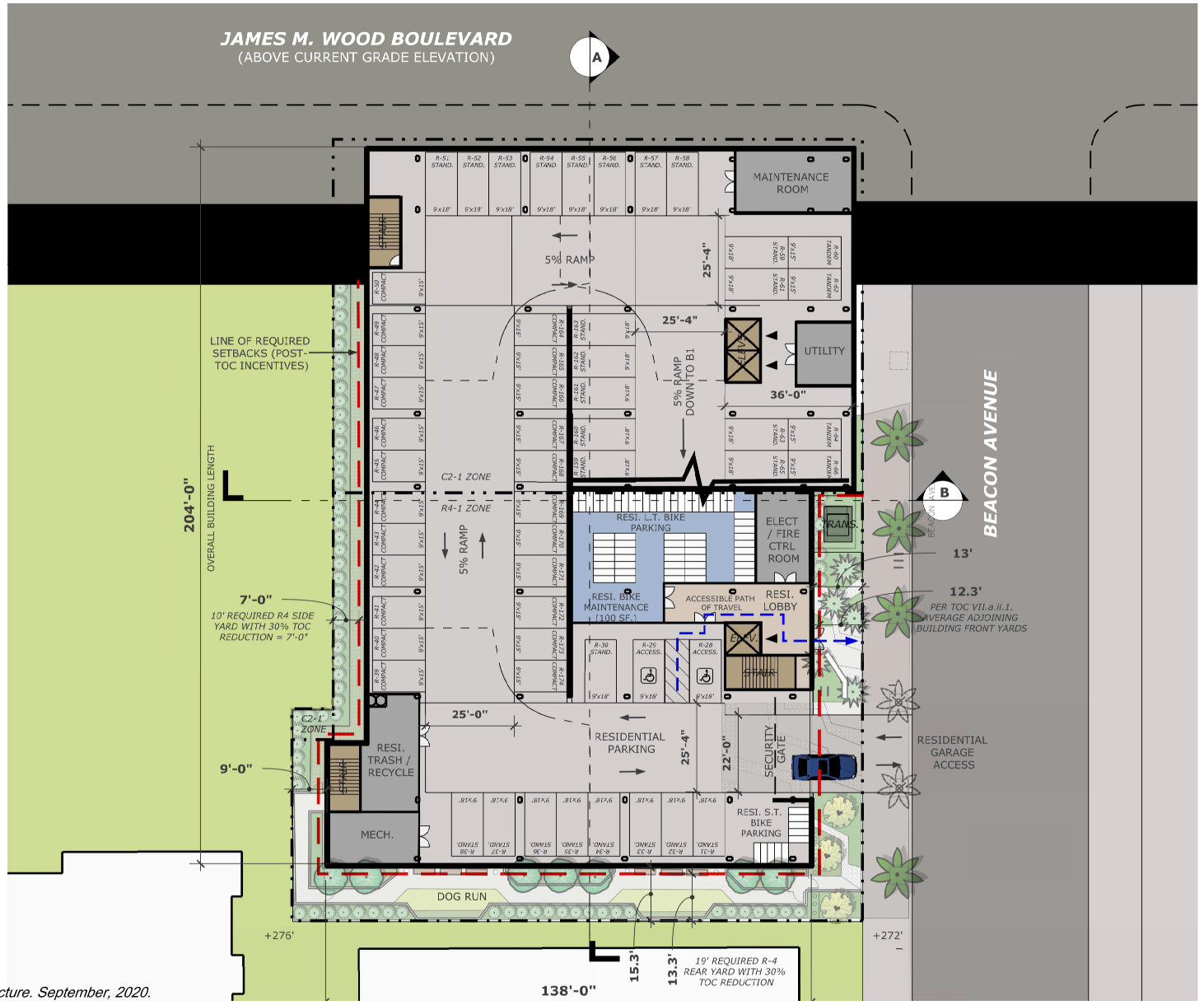
As shown in Figure 2B, this transportation assessment includes the key intersections along Beacon Avenue and James M. Wood Boulevard that provide access to the Project Site.

STUDY SCOPE

The scope of analysis for this study was developed in consultation with LADOT and is consistent with *Transportation Assessment Guidelines* (LADOT, July 2020) (the TAG) and in compliance with the California Environmental Quality Act (CEQA) guidelines. The base assumptions and technical methodologies (i.e., trip generation, study locations, analysis methodology, etc.) were identified as part of the study approach and were outlined in a Memorandum of Understanding (MOU) that was reviewed and approved by LADOT and is provided in Appendix A.

ORGANIZATION OF REPORT

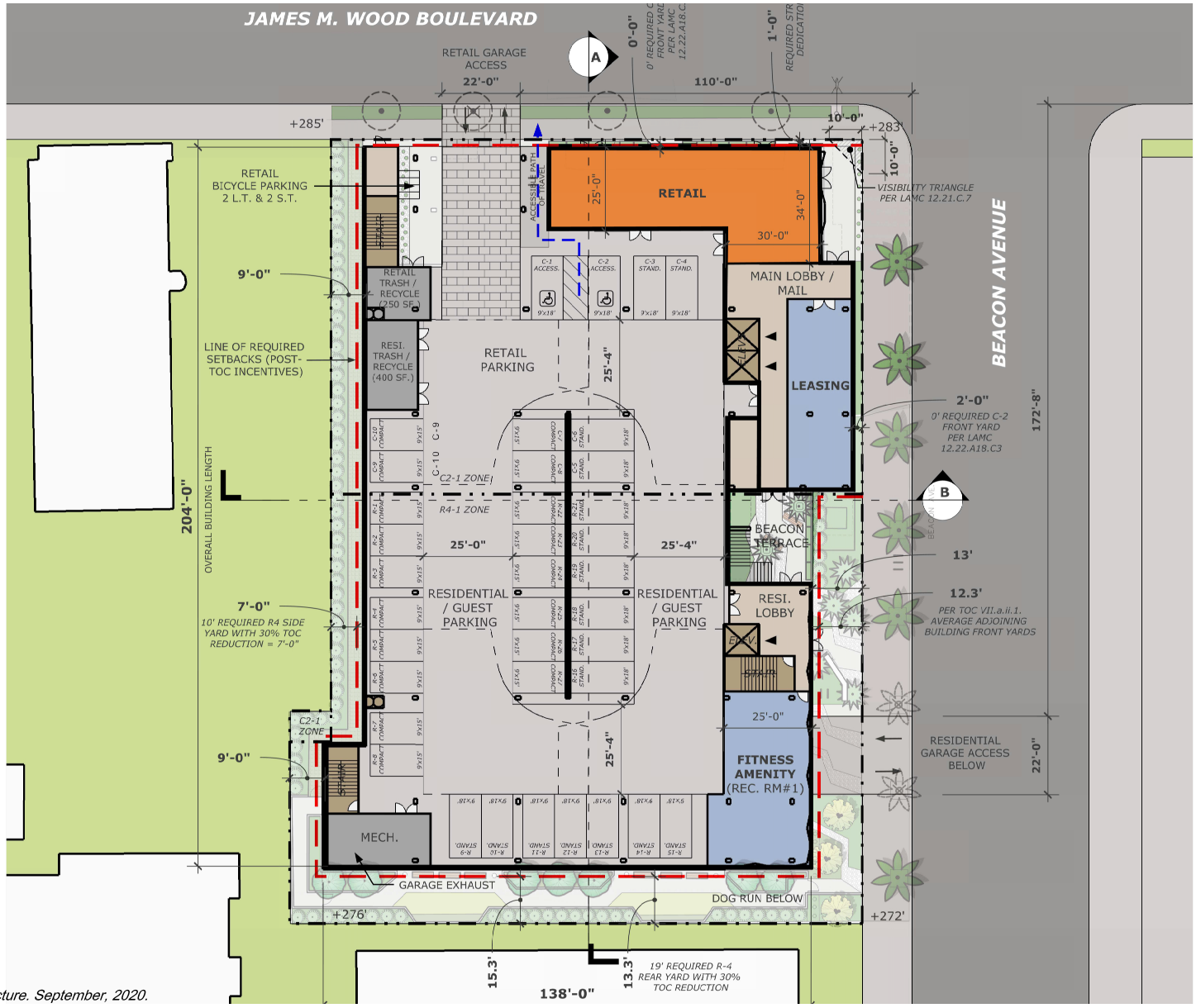
This report is divided into five chapters, including this introduction. Chapter 2 describes the existing and future circulation system, traffic volumes, and traffic conditions in the Study Area. Chapter 3 presents the CEQA analysis of transportation impacts. Chapter 4 details the non-CEQA transportation analyses. Chapter 5 summarizes the analyses and study conclusions. The appendices contain supporting documentation, including the MOU that outlines the study scope and assumptions, and additional details supporting the technical analyses.



Source: NEXT Architecture. September, 2020.

PROJECT SITE PLAN (LEVEL 1)

FIGURE 1A



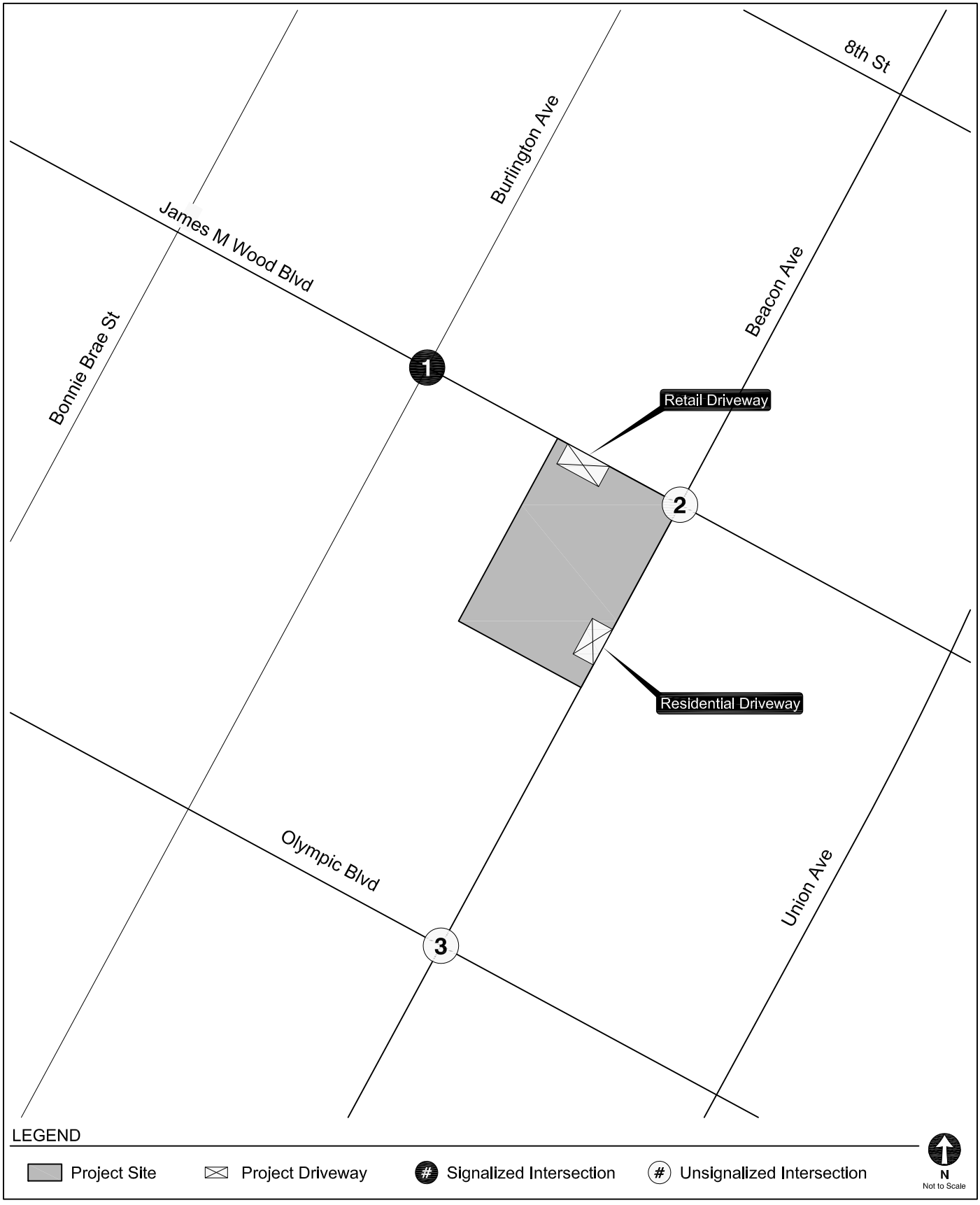
Source: NEXT Architecture. September, 2020.

PROJECT SITE PLAN (LEVEL 2)

FIGURE 1B

PROJECT LOCATION

FIGURE 2A



STUDY AREA & ANALYZED INTERSECTIONS

FIGURE 2B

Chapter 2
Project Context

A comprehensive data collection effort was undertaken to develop a detailed description of existing and future conditions in the Project Study Area.

The Existing Conditions analysis includes an assessment of the existing transportation infrastructure and conditions of the Study Area including freeway and street systems, transit service, and pedestrian and bicycle circulation at the time the MOU was approved in December 2019. Fieldwork (lane configurations, signal phasing, parking restrictions, etc.) for the analyzed intersections was collected in Year 2020. Fieldwork (lane configurations) for the analyzed intersections is provided in Figure 3.

In addition, this chapter contains a discussion of the assumptions used to develop the Future without Project conditions in Year 2023, which corresponds to projected occupancy of the Project.

STUDY AREA

The Study Area includes key intersections along Beacon Avenue and James M. Wood Boulevard and was established in consultation with LADOT based on the following factors identified in the TAG:

1. Primary driveway(s)
2. Intersections at either end of the block on which the Project is located or up to 600 feet from the primary Project driveway(s)
3. Unsignalized intersections adjacent to the Project site that are integral to the Project's site access and circulation plan
4. Signalized intersections in proximity to the Project site where 100 or more Project trips would be added

A total of three intersections, listed in Table 1, were identified for detailed analysis during the MOU process.

EXISTING STREET SYSTEM

The existing street system in the Study Area consists of a regional roadway system including freeways, primary and secondary arterials, and collector and local streets that provide regional, sub-regional, or local access and circulation within the Study Area. These transportation facilities generally provide two to six travel lanes and allow parking on either side of the street. Typically, the speed limits range between 25 and 35 miles per hour (mph) on the streets and between 55 and 65 mph on freeways.

Street classifications are designated in *Mobility Plan 2035, An Element of the General Plan* (Los Angeles Department of City Planning [LADCP], September 2016) (the Mobility Plan). The Mobility Plan has revised street standards in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. The available facilities in the Study Area are defined by the following in the Mobility Plan:

- Freeways are high-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
    - Boulevards represent the widest streets that typically provide regional access to major destinations and include two categories:
        - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph
        - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph
    - Avenues pass through both residential and commercial areas and include three categories:
        - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph

- Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph
- Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph

- Collector Streets are generally located in residential neighborhoods and provide access to and from Arterial Streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with operating speed of 25 mph.

- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Local Streets include two categories:
  - Continuous Local Streets connect to other streets at both ends
  - Non-continuous Local Streets lead to a dead-end

Primary regional access to the Project Site is provided by SR 110, US 101, and I-10. The major Arterials providing regional and sub-regional access to the Project include James M. Wood Boulevard and Olympic Boulevard. The following is a brief description of the major roadways and their classifications in the Mobility Plan:

Freeways

- SR 110 – SR 110 is a freeway that generally runs in the northeast-southwest direction and is located approximately 0.5 miles east of the Project Site. In the vicinity of the Study Area, SR 110 provides three to four travel lanes in each direction. Access to and from SR 110 is available via interchanges at 8th Street and 11th Street.

Roadways

- Beacon Avenue – Beacon Avenue is a designated Local Street running northeast-southwest along the eastern boundary of the Project Site. It provides two travel lanes, one lane in each direction. Travel lanes are generally 10-11 feet wide and the total paved width is 36 feet. Two-hour metered and unrestricted unmetered on-street parking is generally available on both sides of the street within the Study Area.

- James M. Wood Boulevard – James M. Wood Boulevard is an Avenue III running in the northwest-southeast direction and is located along the northern boundary of the Project Site. It generally provides two travel lanes, one lane in each direction, and a two-way left-turn median. Travel lanes are generally 10-11 feet wide and the total paved width is 46 feet. Two-hour metered on-street parking is generally available on both sides of the street within the Study Area.

- Burlington Avenue – Burlington Avenue is a designated Collector Street north of Olympic Boulevard and a designated Local Street south of Olympic Boulevard running northeast-

southwest approximately 300 feet west of the Project Site. It provides two travel lanes, one lane in each direction. Travel lanes are generally 10-11 feet wide and the total paved width ranges from 36-40 feet. Two-hour metered or unrestricted, unmetered on-street parking is generally available on both sides of the street within the Study Area.

- Olympic Boulevard – Olympic Boulevard is a designated Boulevard II running northwest-southeast approximately 0.10 miles south of the Project Site. It provides six travel lanes, three lanes in each direction, with left-turn lanes at intersections. Travel lanes are generally 10 feet wide and the total paved width is 80 feet. Two-hour metered on-street parking with morning and afternoon peak hour restrictions is generally available on both sides of the street within the Study Area.

The existing intersection mobility facilities are shown in Figure 4 and the transportation facilities and pedestrian destinations are shown in Figure 5.

Existing Transit System

The Project Study Area is served by bus lines operated by Metro and LADOT Downtown Area Shuttle (DASH). Figure 6 illustrates the existing transit service in and around the Study Area.

In addition to the bus lines that provide service within the Project Site vicinity, various light rail and subway transit lines operate in and around the Study Area. The Metro Purple Line runs in the east-west direction between Union Station and Koreatown. The Metro Red Line runs in the northwest-southeast direction between Union Station and North Hollywood. In the Project vicinity, the Metro Red and Purple Lines have a stop at the Westlake/MacArthur Park Station, less than 0.5 miles northwest of the Project Site.

Table 2 summarizes the transit lines operating in and around the Study Area, including the type of service (peak vs. off-peak, express vs. local), frequency of service, service area, and hours of operation. The average frequency of transit service during the peak hour was derived from the number of peak-period stops made at the stop nearest the Project Site.

Transit ridership statistics were provided by Metro. This data was used, along with the frequency of service for each line and maximum seated and standing capacity of each bus, to determine the residual transit capacity of routes serving the Project Site. Table 3 summarizes the total residual capacity of the transit lines within 0.25 miles walking distance of the Project Site during the morning and afternoon peak hours, respectively. As shown, the transit lines serving the Project

Site currently have available capacity for 1,266 additional riders during the morning peak hour and 1,222 additional riders during the afternoon peak hour.

Existing Bicycle System

The Mobility Plan includes the specific goals and policies of *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (LADCP, 2010) (2010 Bicycle Plan). The Mobility Plan establishes the overall framework for those components of the 2010 Bicycle Plan and builds upon those goals of improving bicycling for all levels of experience. The existing bicycle system consists of a limited network of bicycle lanes (Class II) and bicycle routes (Class III). Bicycle lanes are a component of street design with dedicated striping, separating vehicular traffic from bicycle traffic. These facilities offer a safer environment for both cyclists and motorists. Bicycle routes and bicycle-friendly streets are those where motorists and cyclists share the roadway and there is no dedicated striping of a bicycle lane. Bicycle routes and bicycle-friendly streets are preferably located on Collector and lower volume Arterial Streets. Bicycle routes with shared lane markings, or "sharrows," remind bicyclists to ride farther from parked cars to prevent collisions, makes motorists aware of bicycles potentially in the travel lane, and shows bicyclists the correct direction of travel. There are currently no bicycle facilities located within the Study Area.

Existing Pedestrian Facilities

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile; these attributes are quantified by WalkScore.com and assigned a score out of 100 points. With the various commercial businesses and cultural facilities adjacent to residential neighborhoods, the walkability of the Study Area is approximately 93 points[1]; this compares to the citywide score of 67 points.

The sidewalks that serve as routes to the Project Site provide proper connectivity and adequate widths for a comfortable and safe pedestrian environment. The sidewalks provide connectivity to pedestrian crossings at study intersections.

[1] Walk Score (www.walkscore.com) rates the Project Site with a score of 93 of 100 possible points (scores accessed on January 6, 2020 for 905 Beacon Avenue). Walk Score calculates the walkability of specific addresses by taking into account the ease of living in the neighborhood with a reduced reliance on automobile travel.

The intersection of Burlington Avenue & James M. Wood Boulevard (Intersection #1) provides marked pedestrian crossings and crosswalk striping on all approaches, including continental crosswalks on the north and south legs. All three study intersections provide Americans with Disabilities Act (ADA) accessible curb ramps as shown in Figure 4.

Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies to eliminate collisions that result in severe injury or death. Vision Zero has identified the High Injury Network, a network of streets based on the collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. Based on LADOT policies, identification of these networks helps to prioritize improvement areas should traffic impacts be identified.

Although no streets within the Study Area have been identified as part of the High Injury Network, the following streets located in proximity to the Study Area have been identified (as shown in Figure 5):

- 8th Street
- Olympic Boulevard
- Union Avenue south of Olympic Boulevard
- James M. Wood Boulevard west of Westlake Avenue

Existing Traffic Volumes

Intersection turning movement counts were collected at the study intersections during the weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods in January 2020. Local schools were in session when all traffic counts were conducted, and the weather conditions were typical. Thus, the existing volumes utilized in this analysis (i.e., traffic volume figures, LOS calculations, etc.) reflect Existing Year 2020 Conditions. The existing intersection peak hour traffic volumes are illustrated in Figure 7. The traffic count worksheets are provided in Appendix B.

FUTURE CUMULATIVE TRANSPORTATION CONDITIONS

The forecast of Future without Project conditions was prepared in accordance with procedures outlined in the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 and following). Specifically, two options are provided for developing the cumulative traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> "(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."

As described in detail below, this analysis includes traffic growth both from future projects (option "A" above, the "Related Projects") and from regional growth projections (option "B" above, or ambient growth). The ambient growth factor discussed below likely includes some traffic growth resulting from the Related Projects. Therefore, the traffic analysis provides a highly conservative estimate of Future without Project traffic volumes.

The Future without Project traffic projections reflect growth in traffic over existing conditions from ambient growth, which reflects increase in traffic due to regional growth and development outside the Study Area, and traffic generated by ongoing or entitled projects in, or in the vicinity of, the Study Area.

Ambient Traffic Growth

Existing traffic is expected to increase as a result of regional growth and development outside the Study Area. Based on discussions with LADOT through the MOU process, a conservative ambient growth factor of 1% per year compounded annually was used to adjust the existing traffic volumes to reflect the effects of the regional growth and development by Year 2023. The total adjustment

applied over the three-year period was 3.03%. This growth factor conservatively accounts for increases in traffic due to potential projects not yet proposed or projects outside the Study Area.

Related Projects

In accordance with the CEQA Guidelines, this study also considered the effects of the Project in relation to other developments either proposed, approved, or under construction (collectively, the Related Projects). With this information, the potential impact of the Project was, therefore, evaluated within the context of the cumulative impact of past, present, and probable future developments capable of producing related or cumulative impacts. The list of Related Projects is based on information provided by LADCP and LADOT, as well as recent studies prepared for projects within the area. The Related Projects are detailed in Table 4 and their approximate locations are illustrated in Figure 8.

Though the estimated buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this study and conservatively assumed to be completed by the Project buildout Year 2023. Therefore, the traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the area that would likely occur in the next three years prior to Project buildout. With the addition of the 1% per year ambient growth factor previously discussed, the Future without Project cumulative condition is even more conservative.

The development of estimated traffic volumes added to the Study Area as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation. Trip generation estimates for the Related Projects were provided by LADOT or were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017). The Related Projects trip generation estimates, shown in Table 4, are conservative in that they do not in every case account for either the existing uses to be removed or the likely use of other travel modes (transit, walk, etc.). Further, they do not account for the internal capture trips within

a multi-use development, nor the interaction of trips between multiple Related Projects within the Study Area in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These include the type and density of the proposed land uses, the geographic distribution of the population from which the employees/residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors are considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Trip Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution patterns described above. Figure 9 shows the peak hour traffic volumes associated with these Related Projects at the study intersections.

Future without Project Traffic Volumes

The Related Project volumes were then added to the Existing traffic volumes after adjustment for ambient growth through the projected completion year of 2023. As discussed above, this is a conservative approach as many of the Related Projects may be reflected in the ambient growth rate. These volumes represent the Future without Project Conditions (i.e., existing traffic volumes added to ambient traffic growth and Related Project traffic growth) for Year 2023 and are shown in Figure 10 for the three study intersections.

Future Roadway Improvements

The roadway network for the Future without Project Conditions within the Study Area could also be affected by regional improvement plans, local specific plans, and programmed improvements (i.e., mitigations for Related Projects). The potential improvements that were identified are discussed below. Figure 11 illustrates the future transportation facilities improvements, including future transit, bicycle, and pedestrian facilities per the Mobility Plan, within the Study Area.

2010 Bicycle Plan. Within the Study Area, the 2010 Bicycle Plan proposes bicycle routes/bicycle friendly streets on Bonnie Brae Street and Union Avenue. No dedicated bicycle lanes were proposed within the Study Area. Since there is currently no schedule for implementation of the proposed bicycle facilities on Bonnie Brae Street or Union Avenue, they were not included in the analysis.

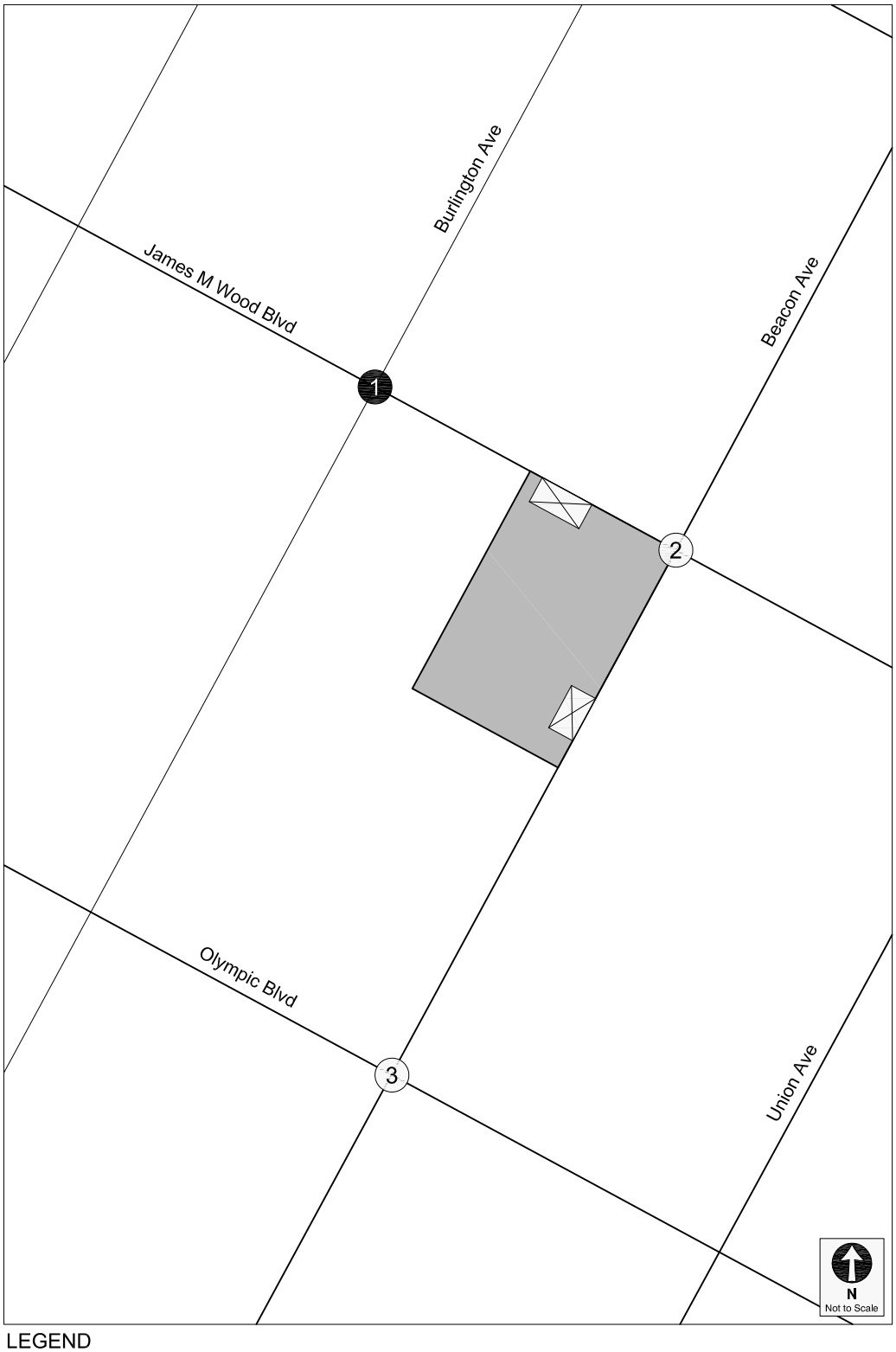
Mobility Plan. In the Mobility Plan, the City identifies key corridors as components of various "mobility-enhanced networks." Each network is intended to focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The specific improvements that may be implemented in those networks have not yet been identified and there is no schedule for implementation; therefore, no changes to vehicular lane configurations were made as a result of the Mobility Plan. However, the following mobility-enhanced networks included corridors within or near the Study Area:

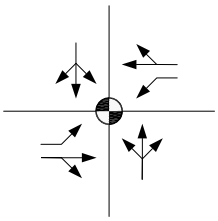
- Transit Enhanced Network: No streets were identified as part of the Transit Enhanced Network.
- Neighborhood Enhanced Network: Beacon Avenue was identified as part of the Neighborhood Enhanced Network.
- Bicycle Enhanced Network / Bicycle Lane Network / Protected Bicycle Facilities Network: No adjacent streets were identified as part of the Bicycle Enhanced Network, Bicycle Lane Network, or Protected Bicycle Facilities Network.
- Pedestrian Enhanced Districts: James M. Wood Boulevard west of Burlington Avenue and east of Beacon Avenue, 8th Street, Union Avenue, and Olympic Boulevard were identified as part of the Pedestrian Enhanced Districts.

Metro Regional Connector. The Metro Regional Connector project is a 1.9-mile underground light rail system that will extend from Little Tokyo to the 7th Street/Metro Center Station, allowing passengers to make direct transfers between the Gold, Blue, and Expo Lines. The Metro Regional Connector will improve access to both local and regional destinations by providing continuous service between these lines and providing connectors to other rail lines via the 7th Street/Metro Center Station. Three new transit stations will be developed with the operation of the Metro Regional Connector. Based on recent information provided on the Metro website[2], the Metro

[2] Construction updates for the Metro Regional Connector are based on information provided at www.metro.net (accessed on January 9, 2020).

Regional Connector is anticipated to be complete and in operation by Year 2022. The Metro Regional Connector will be primarily underground and will not affect the intersection or street configurations in the Study Area.





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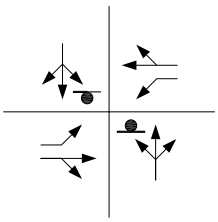

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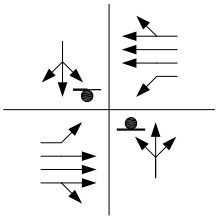


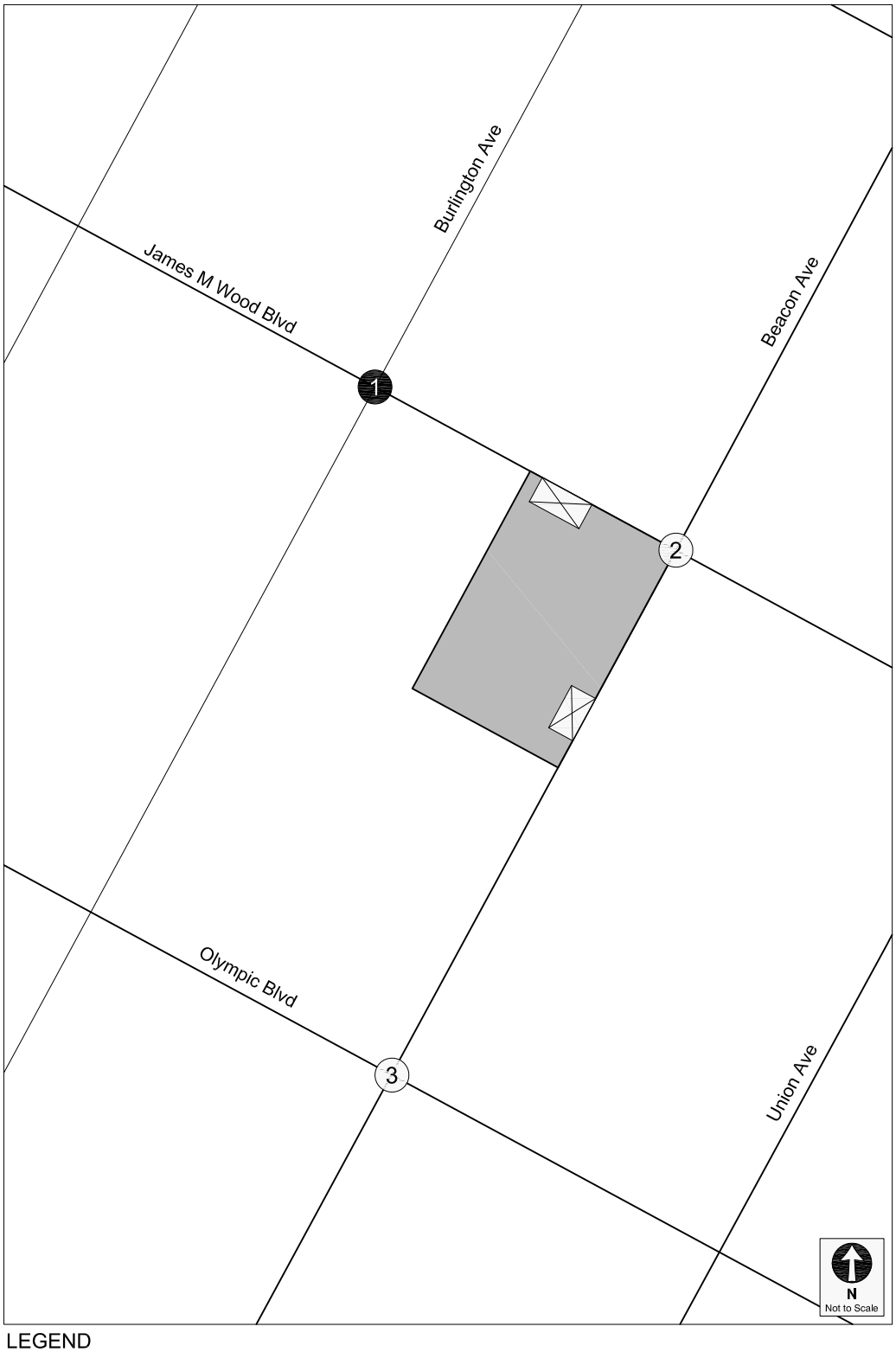
3. Beacon Avenue & Olympic Boulevard

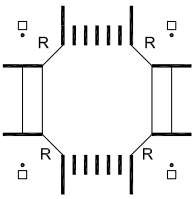
LEGEND

Project Site
Project Driveway
Signalized Intersection
Unsignalized Intersection
Traffic Signal
Stop Sign

INTERSECTION LANE CONFIGURATIONS

FIGURE 3





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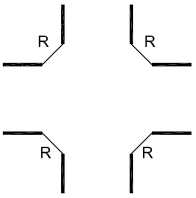
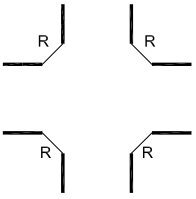


2. Beacon Avenue & James M Wood Boulevard



3. Beacon Avenue & Olympic Boulevard

LEGEND

- Project Site
- Project Driveway
- Signalized Intersection
- Unsignalized Intersection
- Continental Crosswalk
- R Ramp
- Ped Signal
- Ped Call Button

EXISTING INTERSECTION MOBILITY FACILITIES

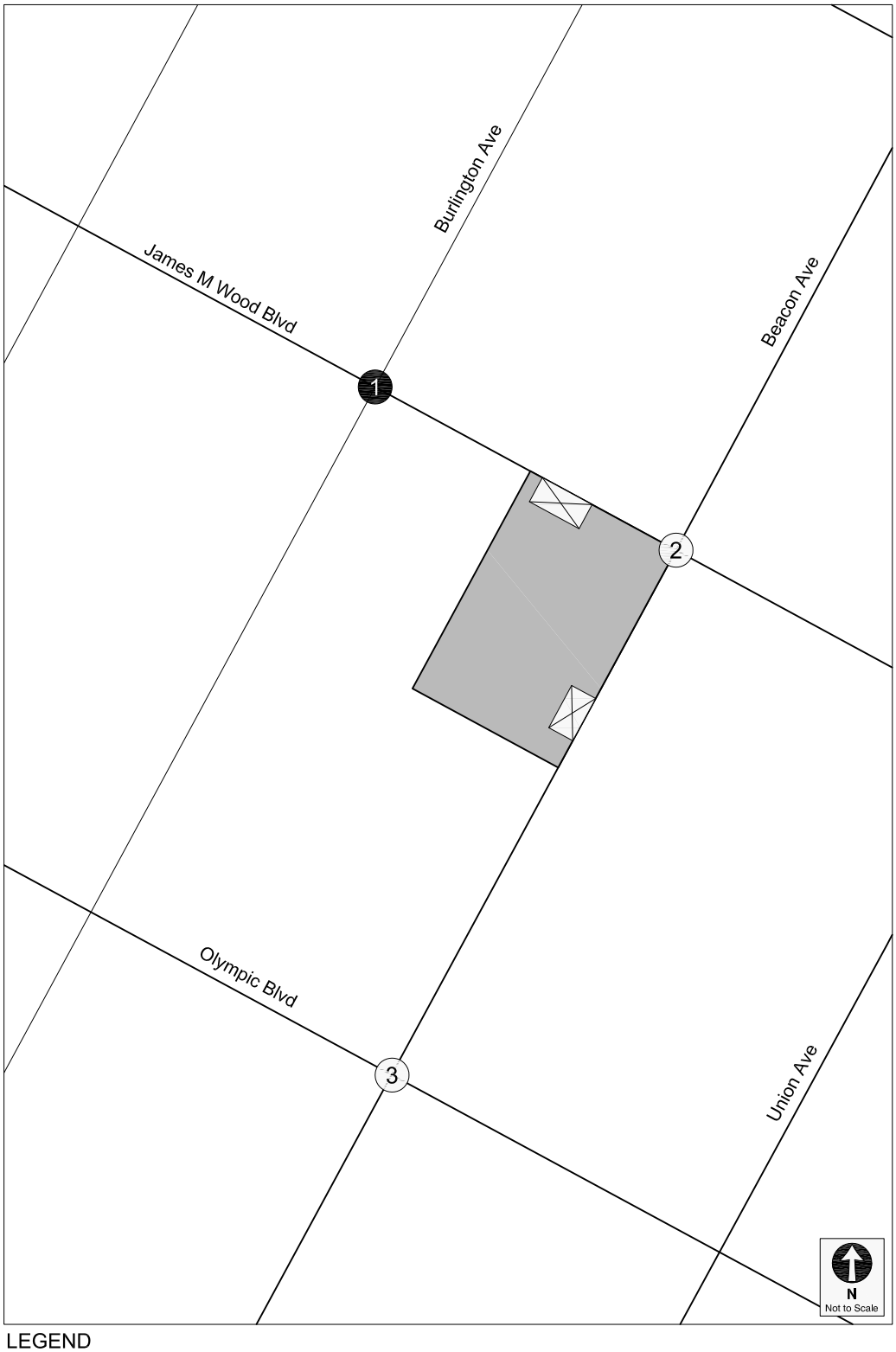
FIGURE 4

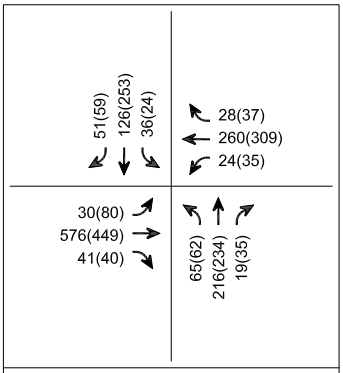
EXISTING TRANSPORTATION FACILITIES & PEDESTRIAN DESTINATIONS

FIGURE 5

EXISTING TRANSIT SERVICE

FIGURE 6





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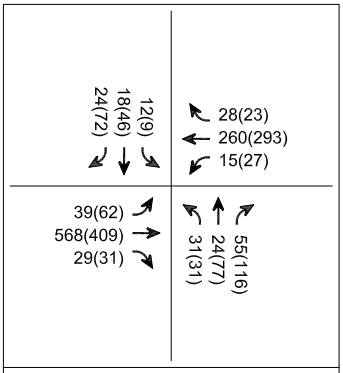

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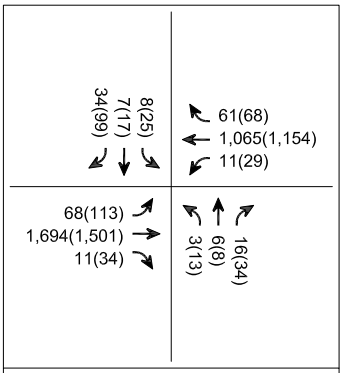


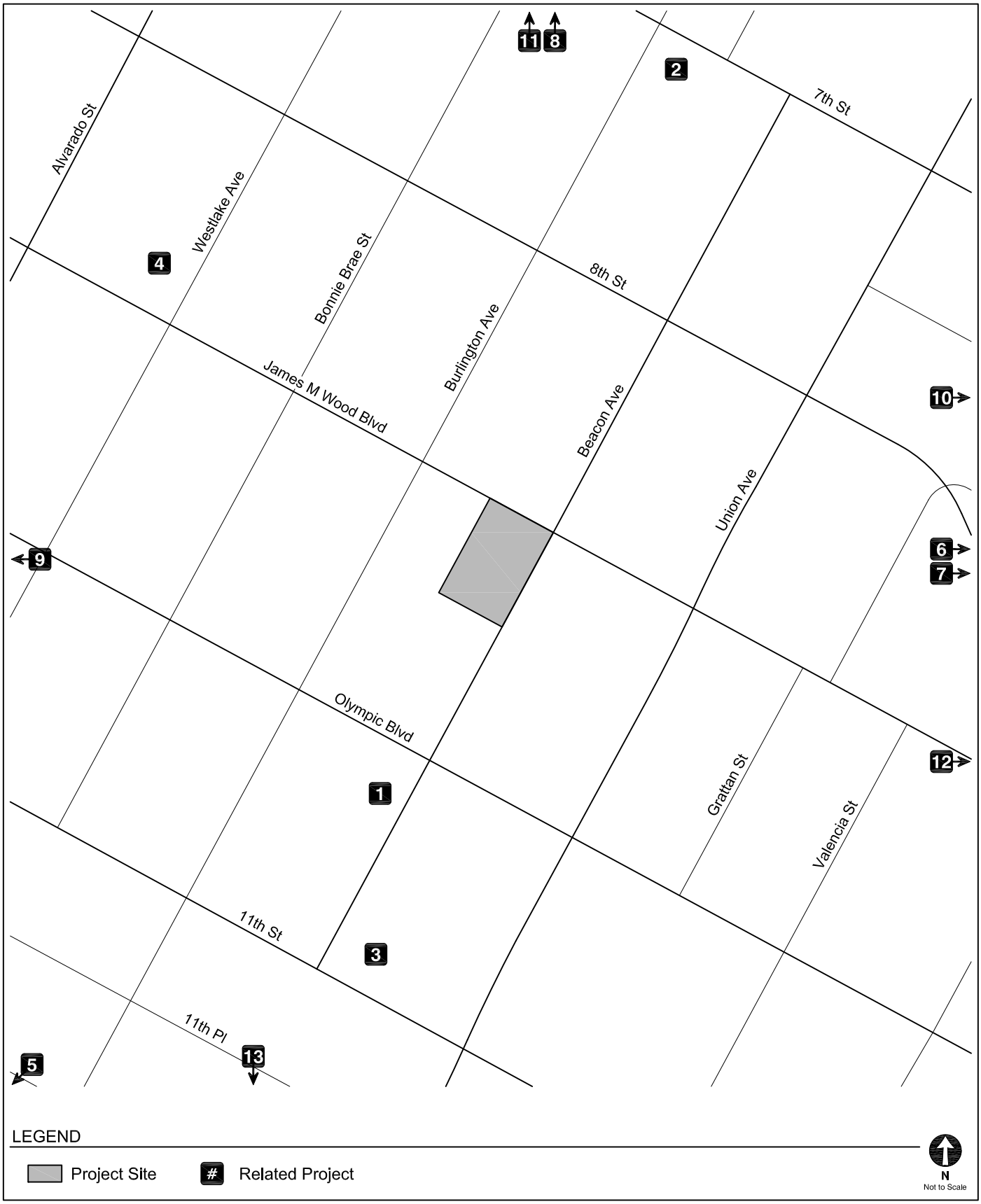
3. Beacon Avenue & Olympic Boulevard

LEGEND

Project Site
Project Driveway
Signalized Intersection
Unsignalized Intersection
#(#) AM(PM) Peak Hour Traffic Volume

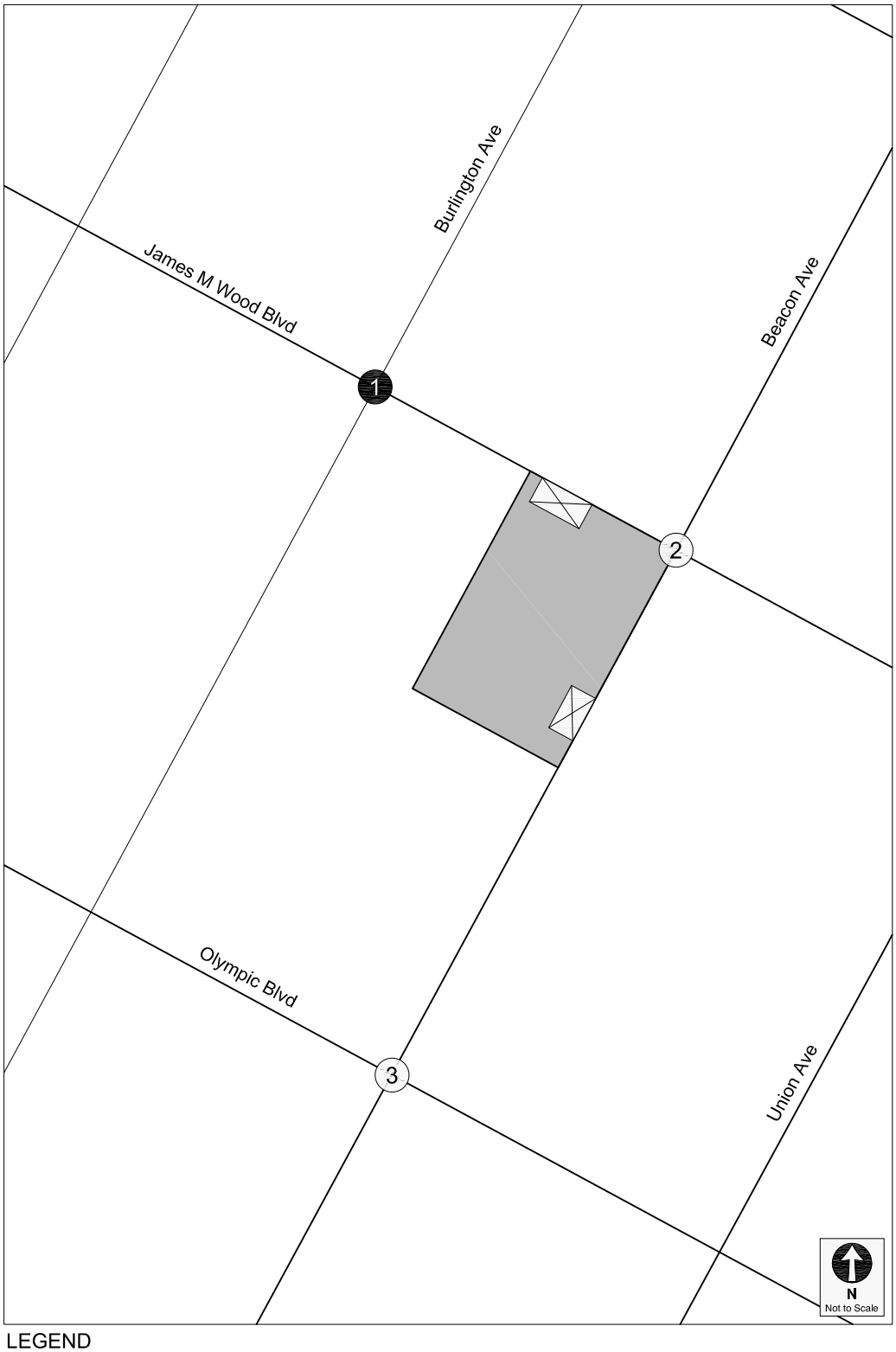
EXISTING CONDITIONS (YEAR 2020)
PEAK HOUR TRAFFIC VOLUMES

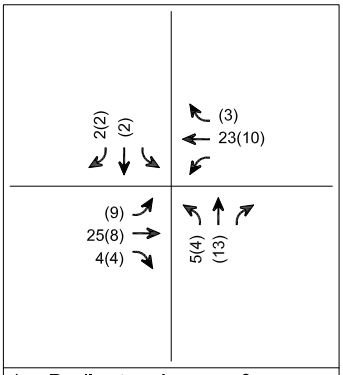
FIGURE 7



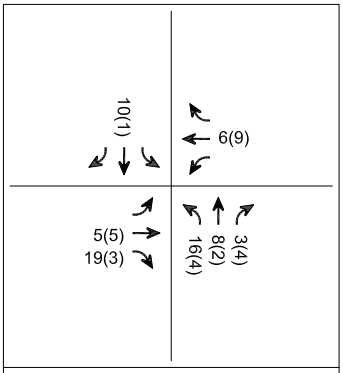
LOCATIONS OF RELATED PROJECTS

FIGURE 8

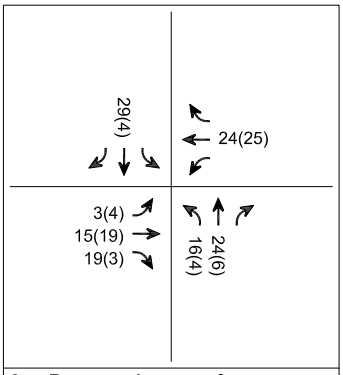




1. Burlington Avenue & James M Wood Boulevard



2. Beacon Avenue & James M Wood Boulevard



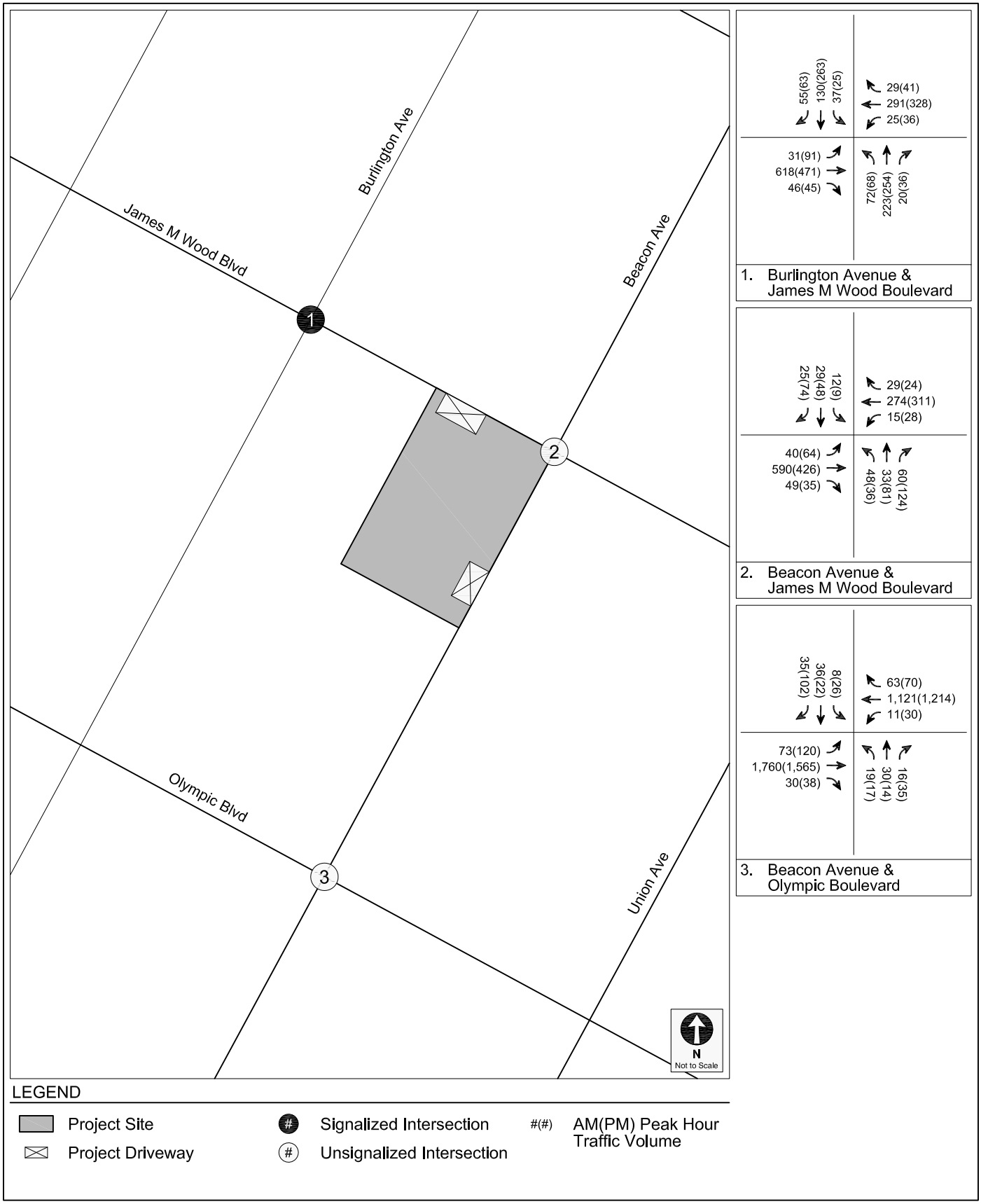
3. Beacon Avenue & Olympic Boulevard

LEGEND

- Project Site
- Project Driveway
- (#) Signalized Intersection
- (#) Unsignalized Intersection
- #(#) AM(PM) Peak Hour Traffic Volume

RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
9



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 10

FUTURE TRANSPORTATION FACILITIES & ROADWAY MODAL PRIORITIES

FIGURE 11

TABLE 1
STUDY INTERSECTIONS

No	N/S Street	E/W Street
1.	Burlington Avenue	James M Wood Boulevard
2. [a]	Beacon Avenue	James M Wood Boulevard
3. [a]	Beacon Avenue	Olympic Boulevard

Notes
[a] Intersection is unsignalized.

TABLE 2
EXISTING TRANSIT SERVICE IN STUDY AREA

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes) [a]			
				Morning Peak Period		Afternoon Peak Period	
Metro Bus Service				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
28	Downtown Los Angeles - Century City via W Olympic Boulevard	Local	4:30 AM - 1:30 AM	16	15	13	17
66	Downtown Los Angeles/Montebello - Wilshire Center via 8th Street & Olympic Boulevard	Local	4:30 A.M. - 1:30 A.M.	8	16	16	11
200	Echo Park - Exposition Park via Alvarado Street & Hoover Street	Local	5:00 AM - 1:30 AM	10	10	9	9
728	Downtown Los Angeles - Century City via West Olympic Boulevard	Rapid	5:00 AM - 9:00 PM	14	13	14	15
LADOT DASH Bus Service				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
PUEP	Pico Union/Echo Park	Local	7:00 A.M. - 7:00 P.M.	14	10	14	10

Notes
Metro: Los Angeles County Metropolitan Transportation Authority; LADOT DASH: Los Angeles Department of Transportation Downtown Area Shuttle.
Morning Peak Period from 6:00 AM to 10:00 AM; Afternoon Peak Period from 3:00 PM to 7:00 PM.
[a] Average headways are based on the total number of trips during the peak period as indicated in Metro ridership data from April, 2019.

TABLE 3
TRANSIT SYSTEM CAPACITY SERVING THE PROJECT SITE

Provider, Route, and Service Area		Capacity per Trip [a]	Peak Hour Ridership [b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		Average Load					
			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
MORNING PEAK HOUR										
Metro Bus Service										
28	Downtown Los Angeles - Century City via W Olympic Boulevard	50	31	17	22	12	28	38	105	152
66	Downtown Los Angeles/Montebello - Wilshire Center via 8th Street & Olympic Boulevard	50	56	21	34	14	16	36	116	135
200	Echo Park - Exposition Park via Alvarado Street & Hoover Street	50	33	33	28	24	22	26	127	163
728	Downtown Los Angeles - Century City via West Olympic Boulevard	50	29	27	19	16	31	34	132	153
LADOT DASH Bus Service										
PUEP	Pico Union/Echo Park	30	n/a	n/a	12	12	18	18	77	108
								Total Transit System Capacity	**1,266**	
AFTERNOON PEAK HOUR										
Provider, Route, and Service Area		**Capacity per Trip** [a]	**Peak Hour Ridership** [b]				**Average Remaining Capacity per Trip**		**Remaining Peak Hour Capacity**	
			Peak Load		**Average Load**					
			NB/EB	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
Metro Bus Service										
28	Downtown Los Angeles - Century City via W Olympic Boulevard	50	27	32	16	23	34	27	153	95
66	Downtown Los Angeles/Montebello - Wilshire Center via 8th Street & Olympic Boulevard	50	29	41	19	31	31	19	116	105
200	Echo Park - Exposition Park via Alvarado Street & Hoover Street	50	41	40	27	31	23	19	161	133
728	Downtown Los Angeles - Century City via West Olympic Boulevard	50	23	34	18	23	32	27	136	108
LADOT DASH Bus Service										
PUEP	Pico Union/Echo Park	30	n/a	n/a	9	9	21	21	89	126
								Total Transit System Capacity	**1,222**	

Notes
Metro: Los Angeles County Metropolitan Transportation Authority.
[a] Capacity assumptions:
Metro Bus - 40 seated / 50 standing.
LADOT DASH - 25 seated / 30 seated and standing.
[b] Ridership information based on data from Metro for April 2019.

TABLE 4
RELATED PROJECT TRIP GENERATION ESTIMATES

No.	Project	Address	Distance from Project Site	Description	Trip Generation Estimates						
					Daily	Morning Peak Hour			Afternoon Peak Hour		
						In	Out	Total	In	Out	Total
1.	Hotel Olympia	1700 W Olympic Bl	0.1 miles	160-room hotel	1,157	44	32	76	45	42	87
2.	Restaurants & Bar	1728 W 7th St	0.2 miles	9,600 sf restaurant and 3,500 sf bar	362	(30)	(40)	(70)	50	17	64
3.	1633 W 11th Street Charter School (K-5)	1633 W 11th St	0.2 miles	460-student K-5 charter school	970	194	158	352	29	37	66
4.	2005 James M Wood Hotel	2005 James M Wood Bl	0.2 miles	100-room hotel	545	24	18	42	20	18	38
5.	Charter High School	1929 W Pico Bl	0.5 miles	480-student high school	821	140	66	206	20	42	62
6.	Apartments	740 S Hartford Ave	0.4 miles	80 apartment units	479	7	30	37	29	15	44
7.	1322 Linwood Apartments	1322 W Linwood Ave	0.3 miles	84 apartment units	449	5	30	35	28	14	42
8.	1930 Wilshire MU	1930 W Wilshire Bl	0.4 miles	478 apartment units, 850-seat theatre, 50-student classroom, and 220-room hotel	1,355	(44)	128	85	103	(41)	61
9.	Assisted Living	1030 S Lake St	0.4 miles	338 assisted living beds and 34 senior housing units	939	39	23	62	49	48	97
10.	Mixed-Use (Lifan Tower)	1235 W 7th St	0.4 miles	306 apartment units and 5,960 sf retail	1,959	30	108	138	114	66	181
11.	Westlake Housing Project	619 S Westlake Ave	0.5 miles	78 apartment units with 60 affordable housing units, 17 permanent supportive housing, and one manager unit	233	11	16	27	11	9	20
12.	Ethos Societe	806 S Garland Ave	0.5 miles	120 apartment units, 33,703 sf office, 6,906 sf retail, and 10,049 sf day care center	1,215	73	61	134	67	87	154
13.	1612 W Pico Charter School (K-4)	1612 W Pico Bl	0.5 miles	1000-student K-4 school	2,182	434	280	714	65	82	147

Notes

[a] Related project information provided by the Los Angeles Department of Transportation in July 2020, Department of City Planning, and recent traffic studies prepared in the area.

Chapter 3
CEQA Analysis of Transportation Impacts

This chapter presents the results of an analysis of CEQA-related transportation impacts. The analysis identifies any potential conflicts the Project may have with adopted City plans and policies and the improvements associated with the potential conflicts, as well as the results of a Project vehicle miles traveled (VMT) analysis that satisfies State requirements under *State of California Senate Bill 743* (Steinberg, 2013) (SB 743).

METHODOLOGY

SB 743, made effective in January 2014, required the Governor's Office of Planning and Research to change the CEQA guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifts from driver delay (level of service [LOS]) to VMT, in order to reduce of greenhouse gas emissions (GHG), create multimodal networks, and promote mixed-use developments.

To adapt to SB 743, the Los Angeles City Planning Commission, on February 28, 2019, recommended the approval of revised Los Angeles CEQA guidelines to include new transportation analysis screening procedures and thresholds, subsequently approved by the Los Angeles City Council on July 30, 2019. The TAG defines the methodology of analyzing a project's transportation impacts in accordance with SB 743.

Per the TAG, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies
- Threshold T-2.1: Causing Substantial Vehicle Miles Traveled (VMT)
- Threshold T-2.2: Substantially Inducing Additional Automobile Travel

- Threshold T-3: Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use

The thresholds were reviewed and analyzed, as detailed in the following Sections 3A-3D. In addition, a CEQA safety analysis of California Department of Transportation (Caltrans) facilities for the Project is provided in Section 3E.

Section 3A: Threshold T-1
Conflicting with Plans, Programs, Ordinances, or Policies Analysis

Threshold T-1 states that a project would result in an impact if it conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

Table 2.1-1 of the TAG provides the City plans, policies, programs, ordinances and standards relevant in determining project consistency. Attachment D of the TAG, *Plans, Policies, and Programs Consistency Worksheet,* provides a structured approach to evaluate whether a project conflicts with the City's plans, programs, ordinances, or policies and to streamline the review by highlighting the most relevant plans, policies, and programs when assessing potential impacts on the City's transportation system. The *Plans, Policies, and Programs Consistency Worksheet* was completed for the Project and provided in Appendix C.

As stated in Section 2.1.4 of the TAG, 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 is consistent with the City documents listed in Table 2.1-1 of the TAG; therefore, the Project would not result in a significant impact under Threshold T-1. Detailed discussion of the plans, programs, ordinances, or policies is provided below.

Mobility Plan

The Mobility Plan combines "complete street" principles with the following five 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 of 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. The amount of information made available by new technologies must be managed responsibly in 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.

Adjacent to the Project Site, James M. Wood Street provides two travel lanes, one westbound and one eastbound lane, as well as a two-way left-turn median. Thus, the driveway along James M. Wood Boulevard would safely accommodate both left-turn and right-turn ingress and egress maneuvers, as the median allows for full access to the driveway. Adjacent to the Project Site, Beacon Avenue provides two travel lanes, one northbound and one southbound lane. The driveway along Beacon Avenue would allow for full access as well. With the development of the Project, James M. Wood Boulevard and Beacon Avenue along the Project frontage would be improved to provide sidewalks in order to meet the long-term mobility goals of the Mobility Plan. Additionally, Beacon Avenue will feature a five-foot side yard setback, providing more landscaped space for pedestrians. The Project would provide safe access for all mode users. Thus, the Project would be consistent with the Safety First goal.

The Project proposes new driveways along Beacon Avenue and James M. Wood Boulevard, a designated Local Street and Avenue III, respectively, in the Mobility Plan. Beacon Avenue requires a 60-foot right-of-way width and 36-foot roadway width, and James M. Wood Boulevard requires a 72-foot right-of-way width and 46-foot roadway width. The Project would dedicate one foot along the James M. Wood Boulevard frontage to meet the right-of-way standards of the Mobility Plan. Truck loading access would also be provided via the new driveway on James M. Wood Boulevard. Neither James M. Wood Boulevard nor Beacon Avenue have been identified as part of the Mobility Plan's Transit Enhanced Network or Bicycle Enhanced Network. Beacon Avenue has been identified as part of the Mobility Plan's Neighborhood Enhancement Network. The Project frontage along Beacon Avenue would be lined with street trees as visual cues to the neighborhood character of the streets. Thus, the Project would provide for a well-maintained and

connected network of transportation mode choices, and the Project would be consistent with the World Class Infrastructure goal.

The Project does not propose repurposing existing curb space and does not propose narrowing or shifting existing sidewalk placement or paving, narrowing, shifting, or removing an existing parkway. Further, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and the Project driveways are not proposed along a street with a bicycle facility. Thus, the Project would be consistent with the Access for All Angelenos goal.

The Project would provide marketing materials on-site to make residents and visitors aware of alternative transportation options to promote the benefits of transportation demand management (TDM). Thus, the Project would be consistent with the Collaboration, Communication, and Informed Choices goal.

As part of the Project, secured bicycle parking facilities would be provided. This would promote active transportation modes such as biking and walking. Thus, the Project would be consistent with the Clean Environments and Healthy Communities goal.

Based on these elements of design and infrastructure, the Project would be consistent with the Mobility Plan.

Plan for a Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (LADCP, 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 Project prioritizes safety and access for all individuals utilizing the site by providing direct pedestrian entrances connected to public pedestrian facilities and ADA accessible. Further, the Project supports healthy lifestyles by locating housing and jobs adjacent to transit (Metro Local and Rapid bus lines), providing bicycle amenities, and enhancing the pedestrian environment by

providing canopy trees and other landscape elements to provide adequate shade and habitat to for a more comfortable environment for pedestrians.

Thus, the Project would be consistent with the goals of *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 the City. The Project is located within the *Westlake Community Plan* (Community Redevelopment Agency of the City of Los Angeles (CRA/LA), September 1997) (the Community Plan) area.

The Project design would be consistent with the goals of the Community Plan, as the Project would expand both housing and commercial retail opportunities, provide employment opportunities, provide connections between public open spaces and pedestrian facilities, and create a mobility-friendly environment through active ground floor uses and pedestrian-oriented design.

Because the Project would be consistent with the goals of the Community Plan, it would also be consistent with the goals of the General Plan.

Redevelopment Plan

The Project Site is located within the *Redevelopment Plan for the Westlake Recovery Redevelopment Project* (CRA/LA, Adopted May 1999) (Redevelopment Plan) area. The Redevelopment Plan's purpose is to further improve the Westlake neighborhood, as related to transportation and traffic, by "encouraging the expansion and improvement of public transportation in coordination with other public improvement projects" and by "supporting a circulation system which will improve the quality of life in Westlake, including pedestrian, automobile, bus connections, parking and mass transit systems with an emphasis on serving existing facilities and meeting future needs."

The Project proposes to develop new residential and commercial uses in Westlake less than 0.5 miles from the Metro Red/Purple Line Westlake/MacArthur Park Station and encourages the use of alternative modes of transportation by providing bicycle facilities.

Thus, the Project would be consistent with the Redevelopment Plan goals.

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

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. As further detailed in Section 4G, the proposed short-term and long-term bicycle parking supply would satisfy the LAMC requirement for the Project to provide 12 short-term bicycle parking spaces and 99 long-term bicycle parking spaces within the Project's on-site parking facility.

LAMC Section 12.26J (TDM Ordinance)

LAMC Section 12.26J, the TDM Ordinance (1993) establishes TDM requirements for non-residential projects, in addition to non-residential components of the mixed-use projects, in excess of 25,000 sf. The commercial component of the Project is 2,400 sf. Therefore, the requirements of LAMC Section 12.26J do not apply to the Project.

LAMC Section 12.37 (Waivers of Dedications and Improvement)

LAMC Section 12.37 states that a project must dedicate and improve adjacent highway and Collector Streets to half-right-of-way standards consistent with street designations from the Mobility Plan. Beacon Avenue currently meets the Mobility Plan standards for a Local Street and, therefore, the Project would not be required to provide any street dedications or improvements on Beacon Avenue. The Project would be required to dedicate one foot along the James M. Wood Boulevard frontage to meet the designated half-right-of-way standards for an Avenue III. Therefore, the Project would be in compliance with the requirements of LAMC Section 12.37.

Vision Zero

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. Several Vision Zero Safety Improvements are planned near the Project Site, including continental crosswalks at Beacon Avenue & James M. Wood Boulevard (Intersection #2) and Beacon Avenue & Olympic Boulevard (Intersection #3). The Project improvements to the pedestrian environment would not preclude future Vision Zero Safety Improvements by the City. Thus, the Project does not conflict with Vision Zero.

Streetscape Plans

The Project is not located within the boundaries of any streetscape plan and, therefore, streetscape plans do not apply to the Project.

Citywide Design Guidelines for Residential, Commercial, and Industrial Development

Citywide Design Guidelines (Los Angeles City Planning Urban Design Studio, October 2019) incorporates urban design principles pertaining to pedestrian-first design that serves to reduce VMT. *City of Los Angeles Urban Design Principles* (LADCP, 2011) aims to improve mobility in the City through transportation mode choices. The Project design includes pedestrian enhancements along the perimeter of the Project Site. In addition, sidewalks along Beacon Avenue and James M. Wood Boulevard would be maintained. Thus, open space and landscaping elements would be incorporated to provide a more comfortable mobility environment for pedestrians. Therefore, the Project would align with *Citywide Design Guidelines* and *City of Los Angeles Urban Design Principles* to provide a safe, comfortable, and accessible experience for all transportation modes.

Walkability Checklist

City of Los Angeles Walkability Checklist – Guidance for Entitlement Review (LADCP, November 2008) serves as a guide for creating improved conditions for pedestrians to travel and contribute to the overall walkability of the City and includes the following topics:

- Sidewalks
- Crosswalks/Street Crossings
- On-Street Parking
- Utilities
- Building Orientation
- Off-Street Parking and Driveways
- On-Site Landscaping
- Building Façade
- Building Signage and Lighting

The Project incorporates many of the recommended strategies applicable to residential and commercial developments, including but not limited to providing continuous and adequate sidewalks along the Project Site, enhancing pedestrian amenities by providing canopy trees and other landscape elements to provide adequate shade for a more comfortable mobility environment for pedestrians, designing direct primary entrances for pedestrians to be visible and ADA accessible, and locating parking beneath the building rather than exposed to the adjacent major streets.

LADOT Transportation Technology Strategy – Urban Mobility in a Digital Age

The LADOT transportation technology strategy, based on *Urban Mobility in a Digital Age: A Transportation Technology Strategy for Los Angeles* (Ashley Z. Hand, August 2016), is designed to ensure the City stays on top of emerging transportation technologies as both a regulator and a transportation service provider. This strategy document includes the following goals:

- Data as a Service: Providing and receiving real-time data to improve the City's ability to serve transportation needs
- Mobility as a Service: Improving the experience of mobility consumers by encouraging partnerships across different modes and fostering clear communication between transportation service providers
- Infrastructure as a Service: Re-thinking how the City pays for, maintains, and operates public, physical infrastructure to provide more transparency

The Project does not interfere with any of the general policy recommendations and/or pilot proposals set forth by this strategy document.

LADOT Manual of Policies and Procedures (Design Standards)

Manual of Policies and Procedures (LADOT, December 2008) provides plans and requirements for traffic infrastructure features in the City, including driveway design and placement guidelines. The Project driveways would be designed, per Section 321, to minimize conflicts between Project vehicles and the adjacent street traffic. Consistent with the maximum allowable width and number of driveways along arterial frontages (Avenue or Boulevard) of less than 200 feet, the Project would provide a 30-foot driveway along James M. Wood Boulevard, a designated Avenue III. In addition, the two-way left-turn median along James M. Wood Boulevard would allow for safer left-turn ingress and egress maneuvers. Adequate reservoir space between the back of sidewalk and the first parking stall and/or security gate would be provided at both the commercial and residential driveways.

The Project does not interfere with any of the policies and procedures contained in *Manual of Policies and Procedures*. Additionally, the Project complies with all applicable LADOT design standards.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with nearby Related Projects to determine if there may be a cumulatively significant impact resulting from inconsistency with a particular program, plan, policy, or ordinance. In accordance with the TAG, the cumulative analysis must include consideration of any Related Projects within 0.50 miles of the Project Site and any transportation system improvements in the vicinity. Related Projects located within 0.50 miles of the Project Site are identified in Table 4.

Similar to the Project, the Related Projects would be individually responsible for complying with relevant plans, programs, ordinances, or policies addressing the circulation system. Thus, the Project, together with the Related Projects, would not result in cumulative impacts with respect to

consistency with each of the plans, ordinances, or policies reviewed. The Project and the Related Projects do not interfere with any of the general policy recommendations and/or pilot proposals and, therefore, there would be no significant Project impact or cumulative impact.

Section 3B: Threshold T-2.1
Causing Substantial VMT Analysis

The Mobility Plan sets forth objectives to decrease VMT. There are associated policies related to land use objectives aimed at shortening the distance between housing, jobs, and services, and increasing the availability of housing near transit, which offers more attractive non-vehicle alternatives and reduces vehicular trip making and congestion.

Threshold T-2.1 of the TAG analyzes whether a project causes substantial VMT and is generally applied to land use projects. Specifically, Threshold T-2.1 inquires whether the project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1). This subdivision states that (for land use projects) “vehicle miles travelled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact.” Public Resources Code Section 21064.3 defines a major transit stop as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon commute periods. The Project Site is located within 0.5 miles of a major transit stop, the Metro B and D Line Westlake/MacArthur Park Station. This subdivision also states that a lead agency has discretion to choose the most appropriate method to evaluate a project’s VMT.

As the Lead Agency for this project, the City uses the analytical methods established by LADOT to determine impacts. Section 2.2.3 of the TAG states that a residential project would result in a significant VMT impact if it 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 a project is located. Similarly, a commercial project would result in a significant VMT impact if it would generate work VMT per employee exceeding 15% below the existing average work VMT per employee for the APC area in which the project is located.

VMT METHODOLOGY

The following details the methodology that vehicle trips and VMT are calculated in *City of Los Angeles VMT Calculator Version 1.3* (July 2020) (VMT Calculator), as detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and LADCP, May 2020). LADOT developed the VMT Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits, which are based on the following types of one-way trips:

- Home-Based Work Production: trips to a workplace destination originating from a residential use
- Home-Based Other Production: trips to a non-workplace destination (e.g., retail, restaurant, etc.) originating from a residential use
- Home-Based Work Attraction: trips to a workplace destination at the Project Site originating from a residential use

As detailed in *City of Los Angeles VMT Calculator Documentation*, the household VMT per capita threshold applies to Home-Based Work Production and Home-Based Other Production trips, and the work VMT per employee threshold applies to Home-Based Work Attraction trips, as the location and characteristics of residences and workplaces are often the main drivers of VMT, as detailed in Appendix 1 of *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Governor's Office of Planning and Research, December 2018). As noted in the TAG, small-scale retail/restaurant components less than 50,000 sf of larger mixed-use development projects are not considered for the purposes of identifying significant work VMT per employee impacts, as those trips are assumed to be local serving and would have a negligible effect on VMT.

Table 2.2-1 of the TAG details the following daily household VMT per capita and daily work VMT per employee impact criteria for the APC areas:

APC	Daily Household VMT per Capita	Daily Work VMT per Employee
Central	6.0	7.6
East LA	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South LA	6.0	11.6
South Valley	9.4	11.6
West LA	7.4	11.1

The Project is located in the Central APC.

Other types of trips generated by the Project include Non-Home-Based Other Production (trips to a non-residential destination originating from a non-residential use at the Project Site), Home-Based Other Attraction (trips to a non-workplace destination at the Project Site originating from a residential use), and Non-Home-Based Other Attraction (trips to a non-residential destination at the Project Site originating from a non-residential use). These trip types are not factored into the VMT per capita and VMT per employee thresholds as those trips are typically localized and are assumed to have a negligible effect on the VMT impact assessment. However, those trips were factored into the calculation of total Project VMT for screening purposes when determining that VMT analysis for the Project would be required.

Travel Behavior Zone (TBZ)

The City developed TBZ categories to determine the magnitude of VMT and vehicle trip reductions that could be achieved through TDM strategies. As detailed in *City of Los Angeles VMT Calculator Documentation*, the development of the TBZs considered the population density, land use density, intersection density, and proximity to transit of each Census tract in the City and are categorized as follows:

1. *Suburban (Zone 1): Very low-density primarily centered around single-family homes and minimally connected street network.*

2. *Suburban Center (Zone 2): Low-density developments with a mix of residential and commercial uses with larger blocks and lower intersection density.*

3. *Compact Infill (Zone 3): Higher density neighborhoods that include multi-story buildings and well-connected streets.*

4. *Urban (Zone 4): High-density neighborhoods characterized by multi-story buildings with a dense road network.*

The VMT Calculator determines a Project's TBZ based on the latitude and longitude of the project address. The Project is located in an Urban (Zone 4) TBZ.

Mixed-Use Development Methodology

As detailed in *City of Los Angeles VMT Calculator Documentation*, the VMT Calculator accounts for the interaction of land uses within a mixed-use development and considers the following sociodemographic, land use, and built environment factors for a project area:

- The project's jobs/housing balance
- Land use density of the project
- Transportation network connectivity
- Availability of and proximity to transit
- Proximity to retail and other destinations
- Vehicle ownership rates
- Household size

Trip Lengths

The VMT Calculator estimates trip lengths based on information from the City's Travel Demand Forecasting (TDF) Model. The TDF Model considers the traffic analysis zones within 0.125 miles of the project to determine the average trip length and trip type, which factor into the calculation of the project's VMT.

Population and Employment Assumptions

As previously stated, the VMT thresholds identified in the TAG are based on household VMT per capita and work VMT per employee. Thus, the VMT Calculator contains population assumptions developed based on Census data for the City and employment assumptions derived from multiple data sources, including *2012 Developer Fee Justification Study* (Los Angeles Unified School District, 2012), the San Diego Association of Governments Activity Based Model, *Trip Generation Manual, 9th Edition* (Institute of Transportation Engineers, 2012), the US Department of Energy, and other modeling resources. A summary of population and employment assumptions for various land uses is provided in Table 1 of *City of Los Angeles VMT Calculator Documentation.*

TDM Measures

Additionally, the VMT Calculator measures the reduction in VMT resulting from a project's incorporation of TDM strategies as project design features or mitigation measures. The following seven categories of TDM strategies are included in the VMT Calculator:

1. Parking
2. Transit
3. Education and Encouragement
4. Commute Trip Reductions
5. Shared Mobility
6. Bicycle Infrastructure
7. Neighborhood Enhancement

TDM strategies within each of these categories have been empirically demonstrated to reduce trip-making or mode choice in such a way as to reduce VMT, as documented in *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association, 2010).

PROJECT VMT ANALYSIS

The VMT Calculator was used to evaluate Project VMT for comparison to the VMT impact criteria. The provide a conservative analysis, the VMT Calculator was modeled for 145 multi-family residential units and 2,400 sf of restaurant use at 905 S. Beacon Avenue.

Per *City of Los Angeles VMT Calculator User Guide* (LADOT and LADCP, May 2020), work VMT per employee is not reported for projects in which the commercial use is local-serving (i.e., less than 50,000 sf) and is considered to be less than significant. Therefore, the Project's 2,400 sf of commercial use would not result in a significant work VMT impact.

The VMT Calculator was set up with the Project's land use program and the respective sizes as the primary input. Based on the Project's proposed land uses and location, the following assumptions were identified in the VMT Calculator:

- Total Population: 327
- Total Employees: 10
- APC: Central
    - Household VMT Impact Threshold: 6.0 VMT per capita
    - Work VMT Impact Threshold: N/A
- TBZ: Urban
    - Maximum VMT Reduction: 75%

As previously discussed, the methodology inherent in the VMT Calculator accounts for the interaction of land uses within a mixed-use development and considers the sociodemographic, land use, and built environment factors for the Project Site and surrounding area. The VMT Calculator considers the interaction between different land uses within the Project. The Project location also considers the proximity to the Metro station, connectivity of walking or driving among different activities, and convenient trip destinations in the area. The Project land use and location information factors are key features that materially reduce single occupancy vehicle trips.

The VMT analysis results based on the VMT Calculator are summarized in Table 5. Detailed output from the VMT Calculator is provided in Appendix D.

Project VMT

The Project includes several design features, which include measures to reduce the number of single occupancy vehicle trips to the Project Site. For the purposes of this analysis, the Project's bicycle parking supply, which is in accordance with LAMC requirements, was accounted for in the VMT evaluation as a project design feature.

As shown in Table 5, the VMT Calculator estimates that the Project would generate 1,314 total household VMT. Thus, based on the population assumptions above, the Project would generate an average household VMT per Capita of 4.0, which falls below the significance thresholds for the Central APC (6.0 VMT per capita). Therefore, the Project would not result in a significant VMT impact, and no mitigation measures would be required.

CUMULATIVE ANALYSIS

Cumulative effects of development projects are determined based on the consistency with the air quality and GHG reduction goals of *Connect SoCal – The 2020--2045 Regional Transportation Plan / Sustainable Communities Strategy* (Southern California Association of Governments [SCAG], Adopted September 2020) (RTP/SCS) in terms of development location, density, and intensity. The RTP/SCS presents a long-term vision for the region's transportation system through Year 2045 and balances the region's future mobility and housing needs with economic, environmental, and public health goals. In addition, as detailed stated in the TAG, projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., household VMT per capita, work VMT per employee) in the impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact, as those projects are already shown to align with the long-term VMT and GHG goals of the RTP/SCS.

The Project would not result in a significant household VMT impact, as detailed above. Therefore, the Project is not anticipated to result in a cumulative VMT impact under Threshold T-2.1, and no further evaluation or mitigation measures would be required.

Furthermore, the Project is served by various local bus lines. In addition, the Project would be designed to further reduce single occupancy trips to the Project Site through TDM strategies including bicycle amenities and facilities.

Thus, the Project encourages a variety of transportation options and is consistent with the RTP/SCS goal of maximizing mobility and accessibility in the region. The Project would also contribute to the productivity and use of the regional transportation system by providing housing near transit and encourage active transportation by providing new bicycle parking and active street frontages, consistent with RTP/SCS goals.

TABLE 5
VMT ANALYSIS SUMMARY

Project Information	
Project Address	905 S Beacon St.
Project Land Uses	**Size**
Multi-Family Housing	145 units
Restaurant	2,400 sf
Project Analysis [a]	
Resident Population	327
Employee Population	10
Project Area Planning Commission	Central
Travel Behavior Zone [b]	Urban
Maximum VMT Reduction [c]	*75%*
VMT Analysis [d][e]	
Daily Vehicle Trips	650
Daily VMT	4,251
Household VMT	1,314
Household VMT per Capita	4.0
Impact Threshold	6.0
Significant Impact	NO

Notes

[a] Project Analysis is from VMT Calculator output reports provided in Appendix E.

[b] An "Urban" TBZ is characterized in *City of Los Angeles VMT Calculator Documentation* (LADOT and DCP, July 2020) as higher density neighborhoods that include multi-story buildings with a dense road network.

[c] The maximum allowable VMT reduction is based on the Project's designated TBZ.

[d] The Project design features include bicycle parking per LAMC requirements.

[e] The Project includes a small-scale/local-serving restaurant component (i.e., less than 50,000 sf), and therefore, is assumed to result in a less than significant work VMT impact

Section 3C: Threshold T-2.2
Substantially Inducing Additional Automobile Travel Analysis

Threshold T-2.2 applies to transportation projects. The TAG explains that transportation projects that increase vehicular capacity can lead to additional travel on the roadway network, which can include induced vehicle travel due to factors such as increased speeds and induced growth. The TAG also provides screening criteria and states that:

> "[i]f the answer is no to the following question, further analysis will not be required for Threshold T-2.2, and a no impact determination can be made for that threshold:
>
> > "T-2.2: Would the project include the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle (HOV) lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than one mile in length designed to improve roadway safety)?"

The Project does not include additional through traffic lanes on existing or new highways, general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges. Accordingly, neither the Project nor any improvements associated with it are considered a transportation project. Therefore, Threshold T-2.2 does not apply to the Project and no further evaluation is required.

Section 3D: Threshold T-3

Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use Analysis

Further evaluation is required for projects that propose new access points or modifications along the public right-of-way (i.e., street dedications) under Threshold T-3. A review of Project access points, internal circulation, and parking access would determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts. Vehicular access to the Project Site would be provided via driveways on Beacon Avenue and James M. Wood Boulevard.

The proposed retail driveway along James M. Wood Boulevard would require a new curb cut along the public right-of-way. The Project would utilize the existing driveway located along Beacon Avenue to provide access to the residential parking levels. The existing driveway would be improved to meet City standards. Any unused curb cuts and driveways would be removed and replaced with sidewalks to maintain pedestrian walkway continuity. All driveways would be designed, placed, and configured to limit vehicle queues and bicycle/pedestrian-vehicle conflicts. Up to three on-street metered parking spaces along James M. Wood Boulevard and up to three on-street unmetered parking spaces on Beacon Avenue would be removed to accommodate the Project driveways. Thus, sight distance from the Project driveways would be further enhanced.

No unusual or new obstacles that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians are presented in the design.

Based on the site plan review and design assumptions, the Project does not present any geometric design hazards related to traffic movement, mobility, or pedestrian accessibility, and is considered less than significant.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with Related Projects with access points along the same block as the proposed project to determine if there may be a cumulatively significant impact. None of the Related Projects identified in Table 4 would provide access along the same block as the Project. Thus, the Project and Related Projects would not result in a cumulative impact under Threshold T-3.

Section 3E
Caltrans Analysis

Recently, LADOT issued *Interim Guidance for Freeway Safety Analysis* (LADOT, May 2020) (City Freeway Guidance) identifying City requirements for a CEQA safety analysis of Caltrans facilities as part of a transportation assessment.

ANALYSIS METHODOLOGY

The City Freeway Guidance relates to the identification of potential safety impacts at freeway off-ramps as a result of increased traffic from development projects. It provides a methodology and significance criteria for assessing whether additional vehicle queueing at off-ramps could result in a safety impact due to speed differentials between the mainline freeway lanes and the queued vehicles at the off-ramp.

Based on the City Freeway Guidance, a transportation assessment for a development project must include analysis of any freeway off-ramp where the project adds 25 or more peak hour trips. A project would result in a significant impact at such a ramp if each of the following three criteria were met:

1. Under a scenario analyzing future conditions upon project buildout, with project traffic included, the off-ramp queue would extend to the mainline freeway lanes[3].
2. A project would contribute at least two vehicle lengths (50 feet, assuming 25 feet per vehicle) to the queue.
3. The average speed of mainline freeway traffic adjacent to the off-ramp during the analyzed peak hour(s) is greater than 30 mph.

Should a significant impact be identified, mitigation measures to be considered include TDM measures to reduce a project's trip generation, investments in active transportation or transit

[3] If an auxiliary lane is provided on the freeway, then half the length of the auxiliary lane is added to the ramp storage length.

system infrastructure to reduce a project's trip generation, changes to the traffic signal timing or lane assignments at the ramp intersection, or physical changes to the off-ramp. Any physical change to the ramp would have to improve safety, not induce greater VMT, and not result in secondary environmental impacts.

ANALYSIS RESULTS

Based on the Project's trip generation estimate and traffic distribution pattern detailed in Section 4A, which were reviewed and approved by LADOT as part of the Project's MOU, the Project would not add 25 or more peak hour trips any Caltrans off-ramps. The Project consists of 145 residential units, where most residents are assumed to work in and commute locally to Downtown Los Angeles (approximately 0.75 miles east of the Project Site) via James M. Wood Boulevard and Olympic Boulevard.

Based on the Project's trip generation estimates described further in Chapter 4, even if all inbound Project traffic coming from the east on James M. Wood Boulevard and Olympic Boulevard utilized the nearest Caltrans off-ramp at Olympic Boulevard and SR 110, approximately 0.40 miles east of the Project, the maximum number of Project trips during the peak hours would be approximately 22 trips during the afternoon peak hour and would not meet the 25 peak hour trip threshold. Therefore, the Project would not add 25 or more peak hour trips to any Caltrans off-ramps and would not result in any significant safety impacts.

Chapter 4
Non-CEQA Transportation Analysis

This chapter summarizes the non-CEQA transportation analysis of the Project. It includes Project traffic, the expected access, safety, and circulation operations of the Project, and the nearby pedestrian, bicycle, and transit facilities. This chapter also summarizes the evaluation of the Project's operational conditions and effects due to Project construction.

Per Section 3.1 of the TAG, any deficiencies identified based on the non-CEQA transportation analysis is "not intended to be interpreted as thresholds of significance, or significance criteria for purposes of CEQA review unless otherwise specifically identified in Section 2." Section 3 of the TAG identifies the following four non-CEQA transportation analyses for reviewing potential transportation deficiencies that may result from a development project:

- Pedestrian, Bicycle, and Transit Access Assessment
- Project Access, Safety, and Circulation Evaluation
- Residential Street Cut-Through Analysis
- Project Construction

The four non-CEQA transportation analyses were reviewed in detail in Sections 4B-4E. In addition, a review of the proposed parking and the City's parking requirement for the Project is provided in Section 4G.

OPERATIONAL ANALYSIS METHODOLOGY

Intersection operations were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. A total of three intersections, one signalized and two unsignalized, were selected for detailed transportation analysis, as shown in Figure 2B.

The following traffic conditions were developed and analyzed as part of this study:

- Existing with Project Conditions: This analysis condition projects the potential intersection operating conditions that could be expected if the Project were built under existing conditions. In this scenario, the Project-generated traffic is added to the Existing Conditions.

- Future with Project Conditions (Year 2023): This analysis condition projects the potential intersection operating conditions that could be expected if the Project were built in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions.

Operational Evaluation

In accordance with the TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology, which was implemented using Synchro software and signal timing worksheets from the City to analyze intersection operating conditions. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections, while the HCM unsignalized methodology calculates the control delay, in seconds, for individual approaches of an intersection. Table 6 presents a description of the LOS categories, which range from excellent, nearly free-flow traffic at LOS A to stop-and-go conditions at LOS F, for signalized and unsignalized intersections. The queue lengths were estimated using Synchro, which reports the 85th percentile queue length, in feet, for each approach lane. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology.

LOS and queuing worksheets for each scenario are provided in Appendix E.

TABLE 6
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Delay [a]	
		Signalized Intersections	Unsignalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10	≤ 10
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20	> 10 and ≤ 15
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35	> 15 and ≤ 25
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55	> 25 and ≤ 35
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80	> 35 and ≤ 50
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80	> 50

Notes

Source: *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016).

[a] Measured in seconds.

Section 4A
Project Traffic

Trip generation estimates, trip distribution patterns and trip assignments were prepared for the Project. These components form the basis of the Project's traffic analysis.

PROJECT TRIP GENERATION

The number of trips expected to be generated by the Project was estimated using rates published in *Trip Generation Manual, 10th Edition*. These rates are based on surveys of similar land uses at sites around the country and are provided as both daily rates and morning and afternoon peak hour rates. They relate the number of vehicle trips traveling to and from the Project Site to the size of development of each land use.

Allowable trip generation reductions to account for public transit usage and trips shared between the residential and commercial uses were made in consultation with LADOT. The trip generation estimates include a 15% transit/walk-in reduction, in accordance with the TAG, for a development within 0.25 miles of a Metro Rapid Bus stop (e.g., Metro Rapid Line 728 stop at Union Avenue & Olympic Boulevard). An internal capture adjustment of 5% was applied to the commercial component of the Project to account for person trips made between distinct land uses within a mixed-use development (e.g., residents visiting the commercial use) without requiring an additional vehicle trip. Additionally, a 20% pass-by reduction was applied to the commercial component to account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

As shown in Table 7, after accounting for the adjustments above, the Project is expected to generate 60 new morning peak hour trips (20 inbound, 40 outbound) and 69 new afternoon peak hour trips (42 inbound, 27 outbound).

PROJECT TRIP DISTRIBUTION

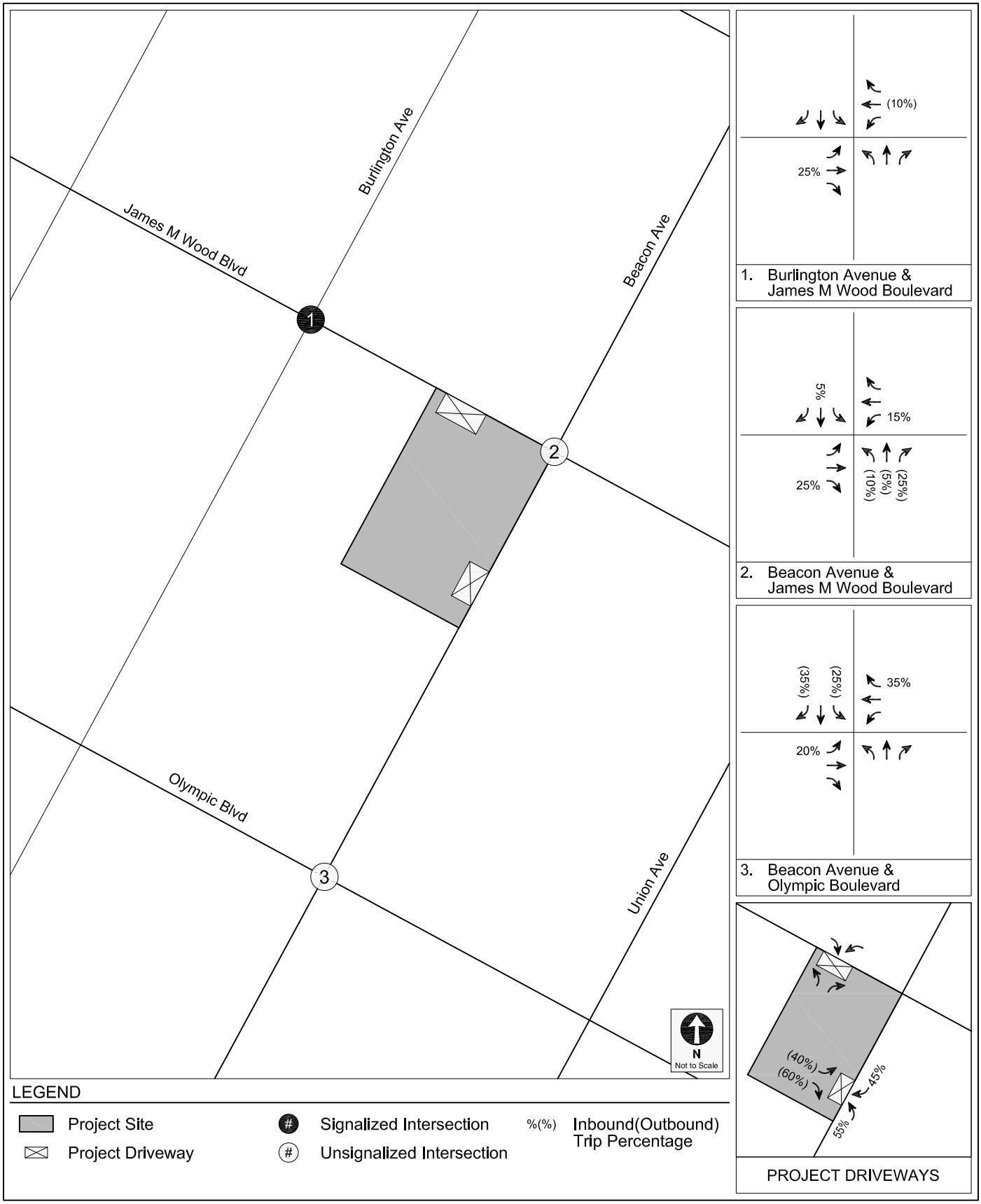
Similar to the trip distribution of traffic for the Related Projects described in Chapter 2, the geographic distribution of trips generated by the Project is dependent on the location of commercial and office centers from which residents and patrons of the Project would be drawn, the characteristics of the street system serving the Project Site, the level of accessibility of the routes to and from the Project Site, existing intersection traffic volumes, the Project ingress/egress availability based on the proposed site access and circulation scheme, and the location of the proposed driveways, as well as input from LADOT staff.

Access to the Project Site would be provided via two full-access driveways, one driveway for residential access on Beacon Avenue and one driveway for commercial access on James M. Wood Boulevard. Based on these considerations, traffic entering and exiting the Project was assigned to the surrounding street system. The intersection-level trip distribution patterns for the Project are shown in Figures 12A and 12B. Regionally, the pattern for both residential and commercial trip distribution is as follows:

- 15% to/from the north
- 40% to/from the east
- 25% to/from the south
- 20% to/from the west

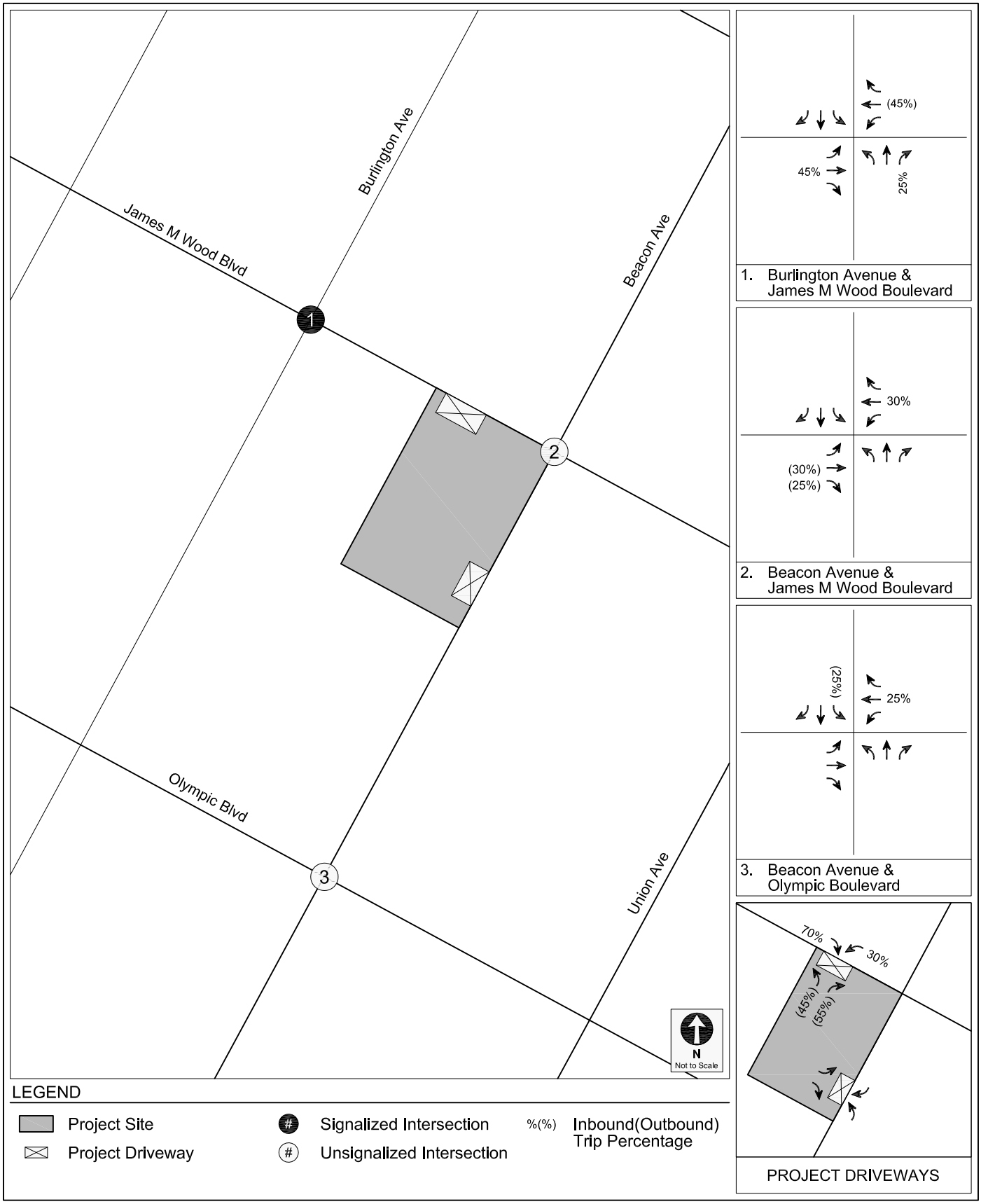
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 7 and the trip distribution patterns shown in Figures 12A and 12B were used to assign the Project-generated traffic through the study intersections. Figure 13 illustrates Project-only traffic volumes at the study intersections during typical weekday morning and afternoon peak hours.

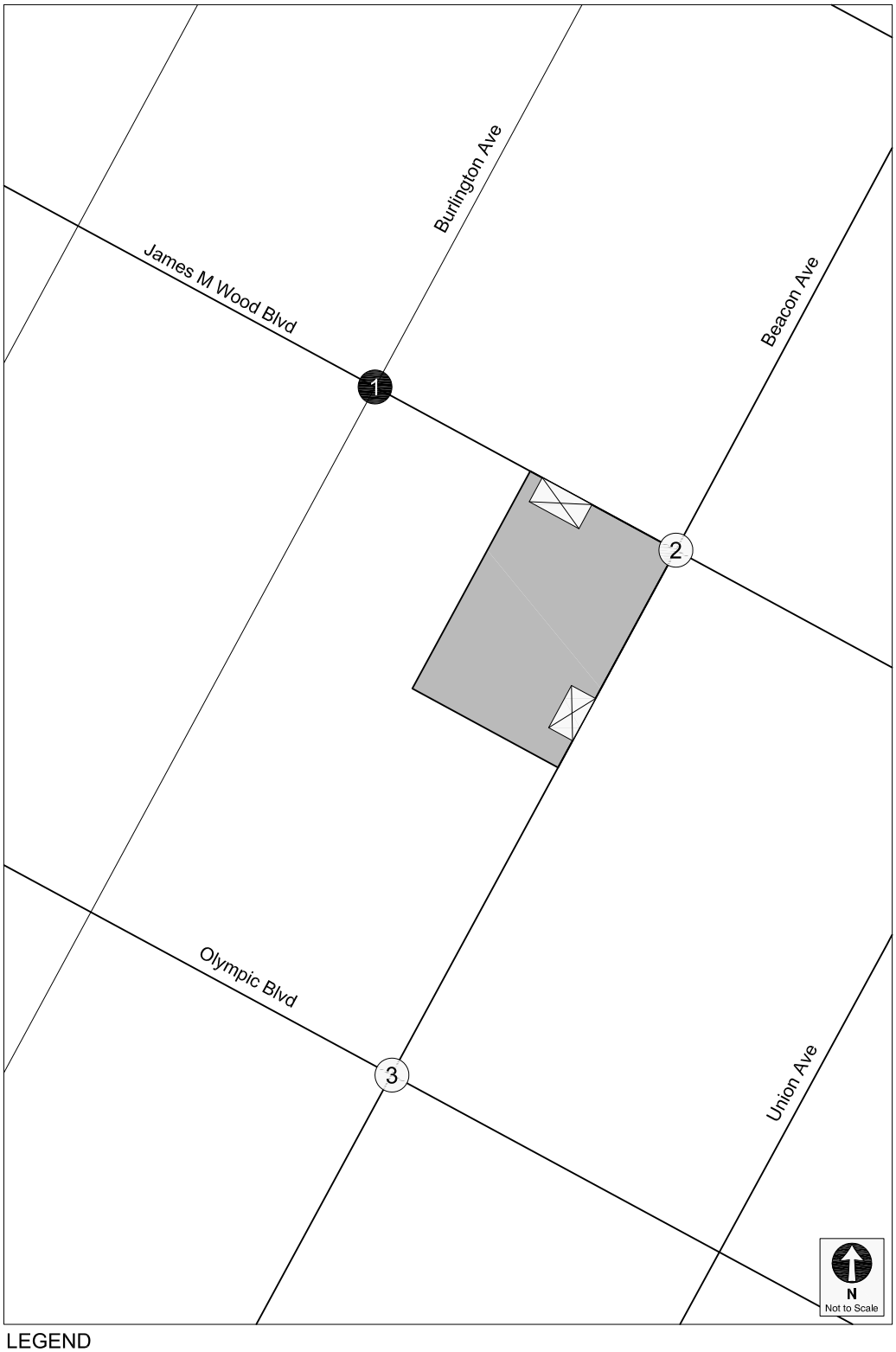


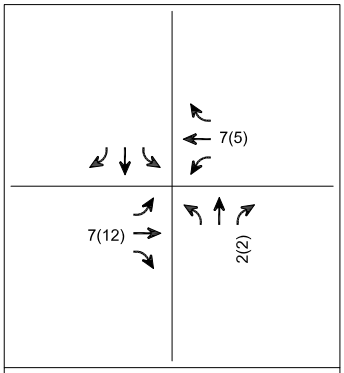
PROJECT TRIP DISTRIBUTION
RESIDENTIAL

FIGURE
12A

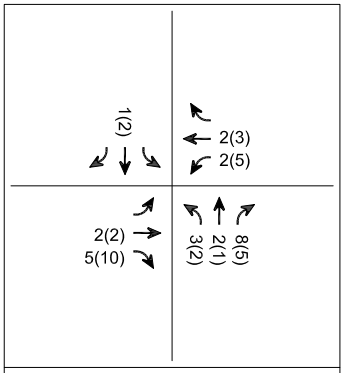


PROJECT TRIP DISTRIBUTION COMMERCIAL	FIGURE 12B

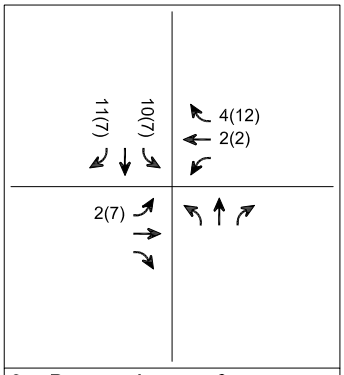




1. Burlington Avenue & James M Wood Boulevard



2. Beacon Avenue & James M Wood Boulevard



3. Beacon Avenue & Olympic Boulevard

LEGEND

Project Site	Signalized Intersection	#(#) AM(PM) Peak Hour Traffic Volume
Project Driveway	Unsignalized Intersection	

PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
13

TABLE 7
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Rate or Size	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multi-Family Housing (Mid-Rise)	221	per du	26%	74%	0.36	61%	39%	0.44
High-Turnover (Sit-Down) Restaurant	932	per 1,000 sf	55%	45%	9.94	62%	38%	9.77
Trip Generation Estimates								
Multi-Family Housing (Mid-Rise)	221	145 du	14	38	52	39	25	64
Transit/Walk Adjustment - 15% [b]			*(2)*	*(6)*	*(8)*	*(6)*	*(4)*	*(10)*
Commercial	932	2,400 sf	13	11	24	14	9	23
Internal Capture - 5% [c]			*(1)*	*0*	*(1)*	*(1)*	*0*	*(1)*
Transit/Walk Adjustment - 15% [b]			*(2)*	*(1)*	*(3)*	*(2)*	*(1)*	*(3)*
Pass-By Adjustment - 20% [d]			*(2)*	*(2)*	*(4)*	*(2)*	*(2)*	*(4)*
TOTAL PROJECT TRIPS			**20**	**40**	**60**	**42**	**27**	**69**

Notes

du = dwelling unit; sf = square feet.

[a] Trip generation rates are from *Trip Generation, 10th Edition* (Institute of Transportation Engineers, 2017).

[b] Per LADOT's *Transportation Assessment Guidelines,* the Project Site is located within a 1/4 mile walking distance from the Metro Route 728 RapidBus stop at Olympic Boulevard and Union Avenue, therefore a transit reduction is applied to accountfor transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.

[c] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development without using an off-site road system (e.g., residents visiting commercial uses).

[e] Per LADOT's *Transportation Assessment Guidelines* , pass-by adjustment of 20% is applied to account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

Section 4B
Project Access and Circulation Assessment

This section summarizes the site access, safety, and circulation of the Project Site. It includes an evaluation of the expected access and circulation operations of the Project.

VEHICLES

This proposed circulation plan for the Project, as described, includes one full access driveway on Beacon Avenue for residential access and one on James M. Wood Boulevard for commercial access, along the eastern and northern Project boundaries, respectively. The driveway widths would conform to LADOT minimum standards for a driveway and includes a single inbound and single outbound travel lane. The circulation aisle widths of the parking areas would be designed to allow adequate and safe circulation of vehicles without significant conflicts and would conform to LADOT parking aisle width standards.

The vehicular access system is adequate to serve the site and no points of congestion that would affect traffic flow on the adjacent public streets are anticipated.

PEDESTRIANS AND BICYCLES

Pedestrian access to the Project Site would be provided via commercial and residential lobby entrances accessed from the sidewalks along Beacon Avenue and James M. Wood Boulevard. The Project access locations would be designed to provide adequate sight distance, sidewalks, crosswalks, and pedestrian movement controls that meet the City's requirements to protect pedestrian safety. All roadways and driveways intersect at right angles and street trees and other potential impediments to adequate driver and pedestrian visibility would be minimal.

Residents and patrons arriving by bicycle would have the same access opportunities as pedestrian visitors. As part of the Project, bicycle parking spaces and storage would be provided

within the parking areas. In order to facilitate bicycle use, short-term and long-term bicycle parking spaces would be provided, consistent with LAMC Section 12.21 A16.

Section 4C

Pedestrian, Bicycle, and Transit Assessment

Factors to consider when assessing a project's potential effect on pedestrian, bicycle, and transit facilities include the following:

- Would the project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities?
- Would a project intensify use of existing pedestrian, bicycle, or transit facilities?

PEDESTRIANS AND BICYCLES

The Project would not directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian or bicycle facilities or preclude the installation of future facilities. Although the Project may intensify use of existing pedestrian and bicycle facilities, the Project access would be designed in accordance with City standards to ensure the safety of those accessing the site and utilizing the street system surrounding it. The driveways would be designed according to City design standards to reduce conflicts between vehicles and pedestrians/bicycles.

TRANSIT

As detailed in Chapter 2, the Study Area is served by numerous established transit routes. Bus transit service operated by Metro and LADOT DASH is available as part of the public transit system in the vicinity of the Project Site.

Although the Project (and other Related Projects) will cumulatively add transit ridership, the Project Site and the Study Area are served by transit lines with residual capacity, as detailed in Tables 2 and 3. As shown in Table 3, the total residual capacity of the bus lines within the Study Area during the morning and afternoon peak hours is approximately 1,266 and 1,222 transit trips, respectively. As shown in Table 7, transit usage accounts for the reduction of approximately 11

morning peak hour vehicle trips and 13 afternoon peak hour vehicle trips. If it is conservatively assumed each vehicle has an average vehicle occupancy (AVO) of 1.55, in accordance with the AVO for all trip purposes identified for Los Angeles County in *SCAG Regional Travel Demand Model and 2012 Model Validation* (SCAG, March 2016), this transit/walk-in reduction equates to approximately 17 person trips in the morning and 20 person trips in the evening. Compared to the total residual capacity of the transit lines within the Study Area during morning and afternoon peak, these person trips represent less than 2%. Overall, the transit systems in the Project vicinity can accommodate the Project's person trips without significantly reducing capacity.

Section 4D
Operational Evaluation

This section provides a quantitative evaluation of the Project's access and circulation operations, including the anticipated LOS at the study intersections and anticipated traffic queues.

LOS ANALYSIS

The intersection analysis was conducted based on the HCM methodologies to identify delay and LOS at each of the study intersections with development of the Project. Detailed LOS calculation worksheets are provided in Appendix E.

Existing with Project Conditions

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Section 4A and shown in Figure 13 were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 7. The resulting volumes are illustrated in Figure 14 and represent Existing with Project Conditions, assuming Project operation under Existing Conditions.

Intersection LOS. Table 8 summarizes the weekday morning and afternoon peak hour LOS results for each of the signalized study intersections under Existing and Existing with Project Conditions. As shown in Table 8, two of the three study intersections currently operate at LOS D or better during both the morning and afternoon peak hours under both Existing and Existing with Project Conditions. The remaining intersection of Beacon Avenue & James M. Wood Boulevard (Intersection #2), an unsignalized intersection, operates at LOS D during the morning peak hour and at LOS F in the afternoon peak hour. It should be noted that the HCM Two-Way Stop Control Unsignalized methodology calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach and does not account for traffic gaps created by adjacent traffic signals.

Future with Project Conditions

All future cumulative traffic growth (i.e., ambient and Cumulative Project traffic growth) and transportation infrastructure improvements described in Chapter 2 were incorporated into this analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Section 4A and shown in Figure 13 were added to the Future without Project (Year 2023) morning and afternoon peak hour traffic volumes shown in Figure 10. The resulting volumes are illustrated in Figure 15 and represent Future with Project Conditions in Year 2023.

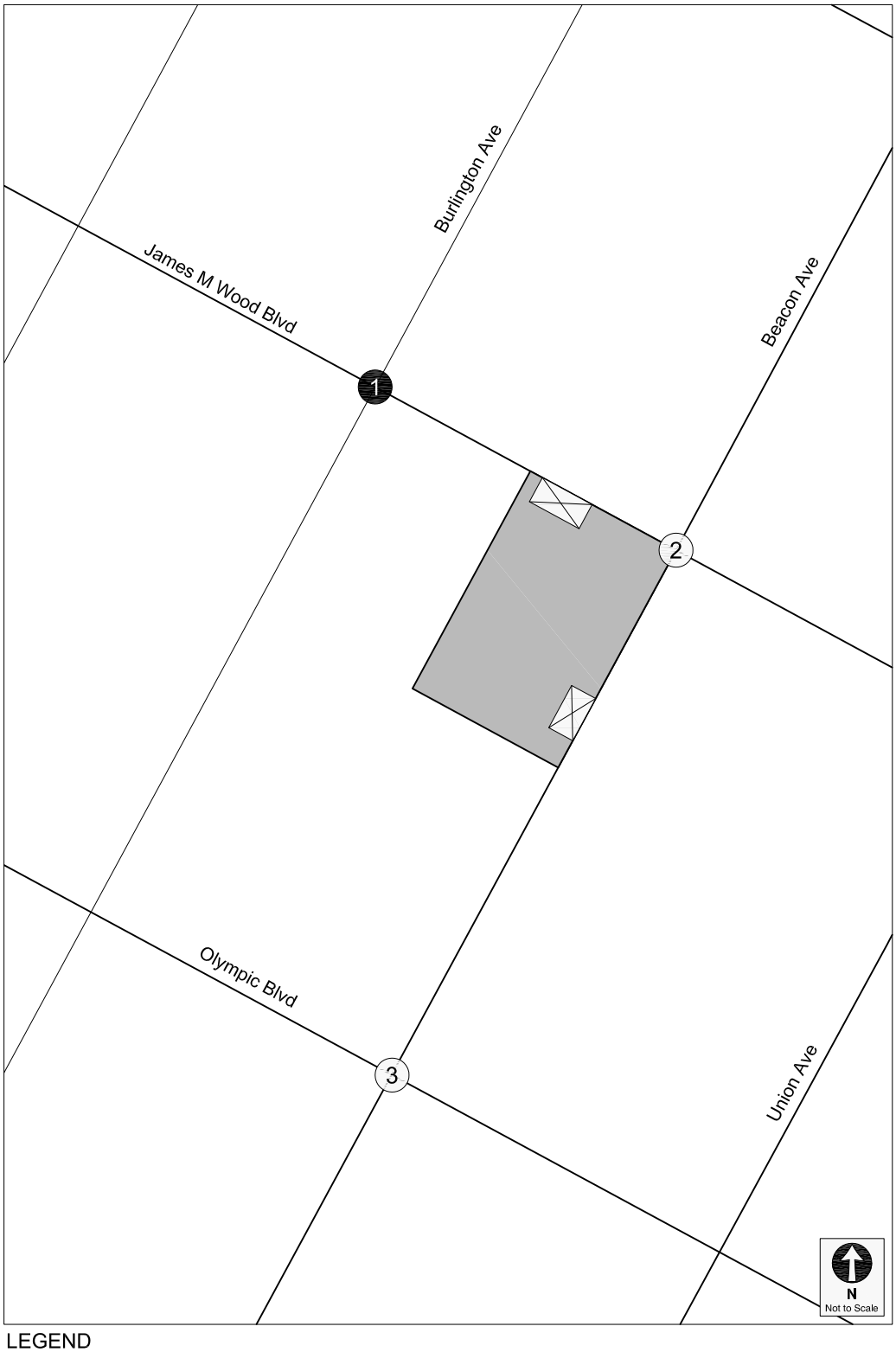
Intersection LOS. Table 9 summarizes the results of the Future without Project (Year 2023) and Future with Project Conditions during the weekday morning and afternoon peak hours for each of the study intersections. As shown in Table 9, one of the three study intersections is anticipated to operate at LOS D or better during both the morning and afternoon peak hours under both Future without Project (Year 2023) and Future with Project (Year 2023) Conditions. The remaining two unsignalized intersections are projected to operate at LOS E or F during either of the analyzed peak hours. It should be noted that the HCM Two-Way Stop Control Unsignalized methodology calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach and does not account for traffic gaps created by adjacent traffic signals.

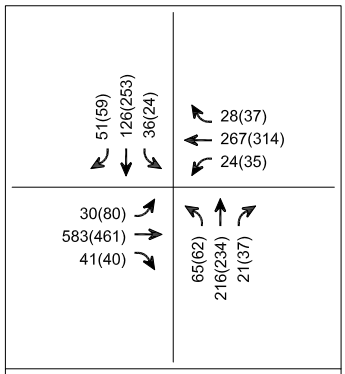
INTERSECTION QUEUING ANALYSIS

The study intersections were analyzed to determine whether the storage lengths of intersection turning lanes were enough to accommodate vehicle queue lengths. In addition, a queuing evaluation was conducted at the Project driveways to review the access and circulation operations.

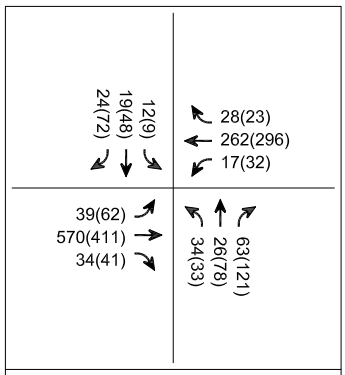
The queue lengths were estimated using Synchro software, which reports the 85th percentile queue length, in feet, for each approach lane. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology.

Detailed queuing analysis worksheets are provided in Appendix E.

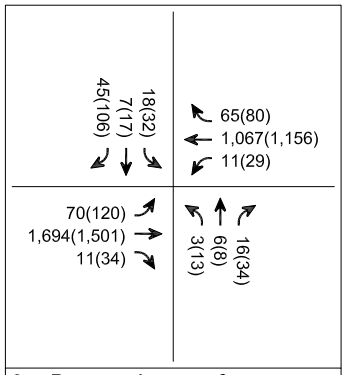




1. Burlington Avenue & James M Wood Boulevard



2. Beacon Avenue & James M Wood Boulevard



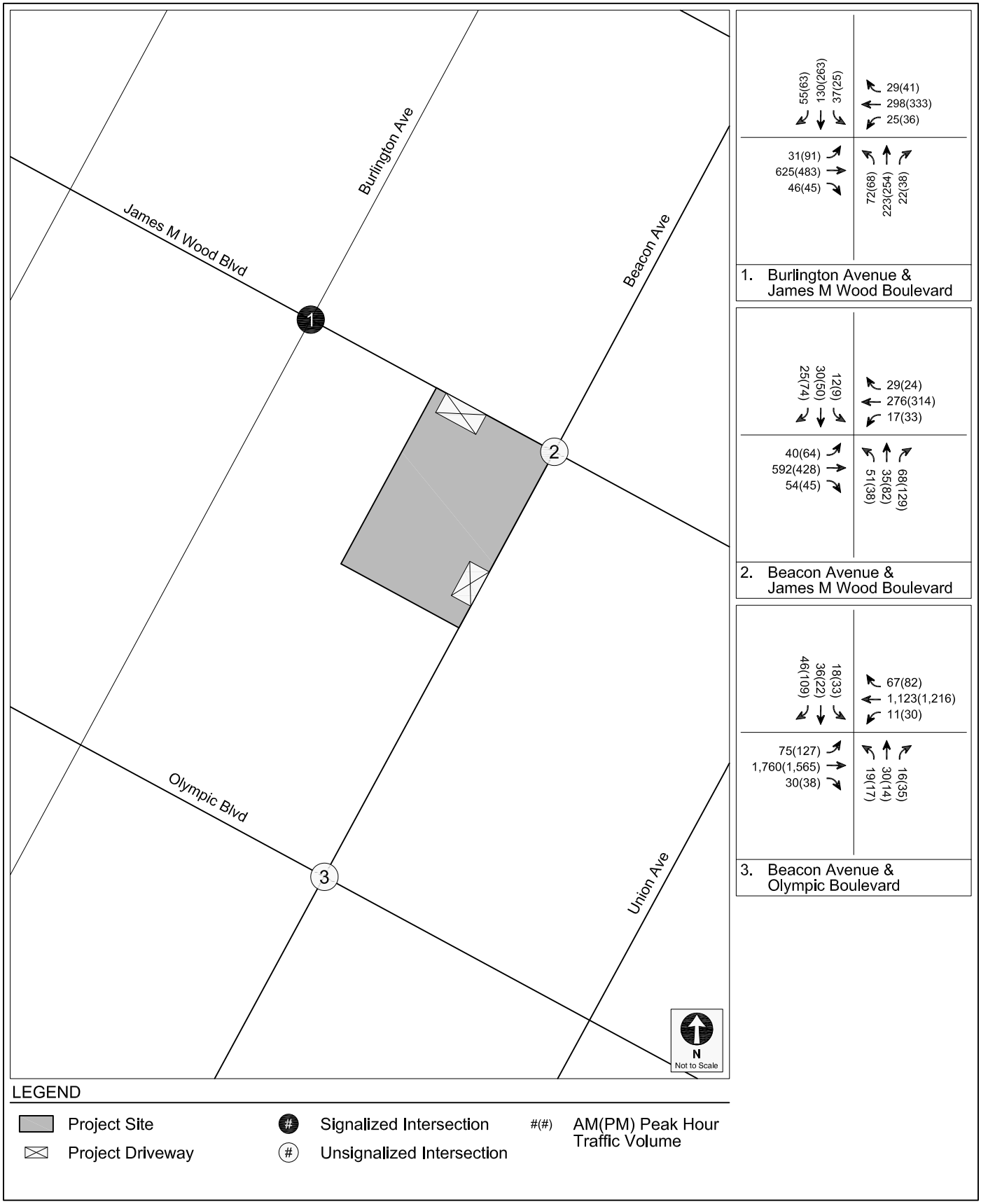
3. Beacon Avenue & Olympic Boulevard

LEGEND

Project Site
Project Driveway
Signalized Intersection
Unsignalized Intersection
#(#) AM(PM) Peak Hour Traffic Volume

EXISTING WITH PROJECT CONDITIONS (YEAR 2020)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 14



FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 15

TABLE 8
EXISTING WITH PROJECT CONDITIONS (YEAR 2020)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Exisiting		Existing with Project	
			Delay	LOS	Delay	LOS
1.	Burlington Avenue &	AM	13.3	B	13.3	B
	James M. Wood Boulevard	PM	14.2	B	14.2	B
2.	Beacon Avenue &	AM	28.5	D	31.3	D
[a]	James M. Wood Boulevard	PM	54.8	F	66.5	F
3.	Beacon Avenue &	AM	31.5	D	31.5	D
[a]	Olympic Boulevard	PM	28.8	D	30.9	D

Notes

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 10 (HCM methodology)

[a] Unsignalized intersection analysis based on the HCM Unsignalized Two-Way Stop-Control methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

TABLE 9
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Burlington Avenue &	AM	13.9	B	13.9	B
	James M. Wood Boulevard	PM	14.9	B	14.9	B
2.	Beacon Avenue &	AM	49.0	E	57.1	F
[a]	James M. Wood Boulevard	PM	85.1	F	106.4	F
3.	Beacon Avenue &	AM	34.7	D	34.7	D
[a]	Olympic Boulevard	PM	33.9	D	36.6	E

Notes

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 10 (HCM methodology)

[a] Unsignalized intersection analysis based on the HCM Unsignalized Two-Way Stop-Control methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

Section 4E
Residential Street Cut-Through Analysis

This section summarizes the residential street cut-through analysis for the Project. The residential street cut-through analysis determines potential increases in average daily traffic volumes on designated Local Streets, as classified in the Mobility Plan, that can be identified as cut-through trips generated by the Project and that can adversely affect the character and function of those streets.

Section 3.5.2 of the TAG provides a list of questions to assess whether the Project would negatively affect residential streets. Based on the Project's anticipated trip distribution patterns and driveway placement, Project trips would likely utilize the major thoroughfares such as James M. Wood Boulevard or Olympic Boulevard to access the Project Site. Further, the Project is not projected to lead to trip diversion along other residential Local Streets, nor is the Project projected to add a substantial amount of automobile traffic to congested Arterial Streets that could potentially cause a shift to residential Local Streets. As described in the TAG, it is the City's policy to locate new driveways on lower-volume side streets. Therefore, Project trips utilizing Beacon Avenue would not be considered "cut-through" traffic.

Therefore, residential Local Streets would not be affected by Project traffic and a residential street cut-through analysis would not be required.

Section 4F
Construction Impact Analysis

This section summarizes the construction schedule and construction impact analysis for the Project. The construction impact analysis relates to the temporary impacts that may result from the construction activities associated with the Project and was performed in accordance with Section 3.4, Project Construction, of the TAG.

CONSTRUCTION EVALUATION CRITERIA

Section 3.4.3 of the TAG identifies three types of in-street construction impacts that require further analysis to assess the effects of Project construction on the existing pedestrian, bicycle, transit, or vehicle circulation. The three types of impacts and related populations are:

1. Temporary transportation constraints – potential impacts on the transportation system
2. Temporary loss of access – potential impacts on visitors entering and leaving sites
3. Temporary loss of bus stops or rerouting of bus lines – potential impacts on bus travelers

The factors used to determine the significance of a project's impacts involve the likelihood and extent to which an impact might occur, the potential inconvenience caused to users of the transportation system, and consideration for public safety. Construction activities could potentially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. As detailed in Section 3.4.4 of the TAG, the proposed construction plans should be reviewed to determine whether construction activities would result in 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

PROPOSED CONSTRUCTION SCHEDULE

The Project is anticipated to be constructed over a period of approximately 24 months anticipated to be complete in Year 2023. The construction period would include sub-phases of site demolition, excavation and grading, foundations, and building construction. Peak haul truck activity occurs during excavation and grading, and peak worker activity occurs during building construction. These two sub-phases of construction were studied in greater detail.

With the implementation of the Construction Management Plan, which is described in more detail below, it is anticipated that almost all haul truck activity to and from the Project Site would occur outside of the morning and afternoon peak hours. In addition, as discussed in more detail in the following section, worker trips to and from the Project Site would also occur outside of the peak hours. Therefore, no peak hour construction traffic impacts are expected during the excavation and grading phase of construction.

EXCAVATION AND GRADING PHASE

The peak period of truck activity during construction would occur during excavation and grading of the Project Site.

Haul trucks would travel on approved truck routes designated within the City or on State facilities. Given the Project Site's proximity to SR 110 and I-10, haul truck traffic would take the most direct route to the appropriate freeway ramps. The haul route will be reviewed and approved by the City.

Based on projections compiled for the Project, approximately 31,500 cubic yards (CY) of material would be excavated and removed from the Project Site over a 32-workday period. Based on estimates from the Applicant, this period would require up to 62 haul trucks per day. Thus, up to 124 daily haul truck trips (62 inbound, 62 outbound) are forecast to occur during the excavation

and grading period, with approximately 22 trips per hour (11 inbound, 11 outbound) uniformly over a typical six-hour workday.

Transportation Research Circular No. 212, Interim Materials on Highway Capacity (Transportation Research Board, 1980) defines passenger car equivalency (PCE) for a vehicle as the number of through moving passenger cars to which it is equivalent based on the vehicle's headway and delay-creating effects. Table 8 of *Transportation Research Circular No. 212* and Exhibit 12-25 of the HCM suggest a PCE of 2.0 for trucks. Assuming a PCE factor of 2.0, the 124 truck trips would be equivalent to 248 daily PCE trips. The 22 hourly truck trips would be equivalent to 44 PCE trips (22 inbound, 22 outbound) per hour.

In addition, a maximum of 20 construction workers would work at the Project Site during this phase. Assuming minimal carpooling amongst those workers, an AVO of 1.135 persons per vehicle was applied, as provided in *CEQA Air Quality Handbook* (South Coast Air Quality Management District, 1993). Therefore, 20 workers would result in a total of 18 vehicle trips to and 18 vehicle trips from the Project Site on a daily basis.

BUILDING CONSTRUCTION PHASE

The estimated number of construction workers each day depends on the phase of construction. According to construction projections prepared for the Project, the building subphase of construction would employ the most construction workers, with a maximum of approximately 50 workers per day for all components of the building (i.e., framing, plumbing, elevators, inspections, finishing). However, since the different building components would not be constructed or installed simultaneously, this cumulative estimate likely overstates the number of workers that would be expected on the peak construction day. Furthermore, on most of the estimated workdays to complete the Project, there would be far fewer workers than on the peak day. Therefore, the estimate of 50 workers per day used for the purposes of this analysis represents a very conservative estimate.

Assuming an AVO of 1.135 persons per vehicle, 50 workers would result in a total of 44 vehicles that would arrive and depart from the Project Site each day. The estimated number of daily trips associated with the construction workers is approximately 88 (44 inbound and 44 outbound trips),

but all of those trips would occur outside of the peak hours, as described above. As such, the building phase of Project construction is not expected to cause a significant traffic impact at any of the study intersections.

During construction, adequate parking for construction workers would be secured in local public parking facilities or, if needed, a remote site with shuttle service provided. Restrictions against workers parking in the public right-of-way in the vicinity of (or adjacent to) the Project Site will be identified as part of the Construction Management Plan. All construction materials storage and truck staging would be contained on-site.

POTENTIAL IMPACTS ON ACCESS, TRANSIT, AND PARKING

Project construction is not expected to create hazards for roadway travelers, bus riders, or parkers, so long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk closures, etc.) have been incorporated into the Construction Management Plan. The construction-related impacts associated with access and transit are anticipated to be less than significant, and the implementation of the Construction Management Plan described below would further reduce those impacts.

Access

Construction activities are expected to be primarily contained within the Project Site boundaries. However, it is expected that construction fences may encroach into the public right-of-way (e.g., sidewalks and roadways) adjacent to the Project Site. Adjacent to the Project Site, the parking lanes on Beacon Avenue and James M. Wood Boulevard would be used throughout the construction period for equipment staging, concrete pumping, deliveries, etc. Temporary traffic controls would be provided to direct traffic around any closures as required in the Construction Management Plan. Travel lanes would be maintained on Beacon Avenue and James M. Wood Boulevard throughout the construction period and emergency access would not be impeded.

The use of the public right-of-way along Beacon Avenue and James M. Wood Boulevard would require temporary re-routing of pedestrian and bicycle traffic as the sidewalks fronting the Project Site would be closed. The Construction Management Plan would include measures to ensure pedestrian and bicycle safety along the affected sidewalks, bicycle facilities, and temporary walkways (e.g., use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering).

Transit

There are currently no bus stop locations along the Project frontages on Beacon Avenue and James M. Wood Boulevard. Bus stop relocation or bus rerouting is not required; therefore, no temporary impacts to transit are expected.

Parking

Parking is allowed on Beacon Avenue and James M. Wood Boulevard, adjacent to Project Site, so construction would result in a temporary loss of seven unmetered on-street parking spaces on the west side of Beacon Avenue and six metered on-street parking spaces on the south side of James M. Wood Boulevard. Coordination with the LADOT Parking Meters Division should be included in the Construction Management Plan as a result of the temporary loss of the metered parking spaces on James M. Wood Boulevard.

CONSTRUCTION MANAGEMENT PLAN

A detailed Construction Management Plan, including street closure information, a detour plan, haul routes, and a staging plan, would be prepared and submitted to the City for review and approval, prior to commencing construction. The Construction Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements, as appropriate:

- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation
- Prohibition of construction worker or equipment parking on adjacent streets
- Temporary pedestrian, bicycle, and vehicular traffic controls during all construction activities adjacent to Beacon Avenue and James M. Wood Boulevard, to ensure traffic safety on public rights-of-way
- 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
- Containment of construction activity within the Project Site boundaries
- Construction-related vehicles/equipment shall not park on surrounding public streets
- Coordination with the LADOT Parking Meter Division to address loss of metered parking spaces
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate

Section 4G
Parking

This section provides an analysis of the proposed parking and the potential parking impacts of the Project.

PARKING SUPPLY

All Project parking would be provided on-site. The Project would provide a total of 177 automobile spaces and 111 bicycle spaces, including 12 short-term and 99 long-term bicycle spaces, in one at-grade parking level and two subterranean parking levels.

VEHICLE PARKING CODE REQUIREMENTS

The LAMC details City parking requirements for new developments. Per LAMC Section 12.22A31, the Transit Oriented Communities (TOC) Affordable Housing Incentive Program, the Project qualifies as a Tier 3 Housing Development because it is located within 0.5 miles of a rail transit station. The required parking for residential units in a Tier 3 Eligible Housing Development is 0.5 spaces per unit. TOC Tier 3 mixed-use projects with ground-floor commercial uses can also apply up to a 30% reduction to non-residential parking requirements. In addition, the Project Site is located within a State Enterprise Zone. Therefore, per Section 12.21A4(x)(3), the Project may utilize a lower parking ratio for the proposed commercial uses. The following LAMC parking rates were applied:

- Residential
    - 0.5 space per dwelling unit
- Commercial
    - 2.0 space per 1,000 sf of gross floor area

Per the LAMC, the Project's proposed 145 apartments units would require 73 parking spaces, and the 2,400 sf of commercial space require three spaces. In total, the LAMC parking requirement for the Project is 76 spaces as summarized in Table 10. Thus, the Project's proposed parking supply would meet the LAMC requirements.

BICYCLE PARKING CODE REQUIREMENTS

LAMC Section 12.21.A.16 details the parking requirements for new developments. The LAMC bicycle parking requirement of the Project is based on the following rates:

- Residential
  - Short-Term: Dwelling units 1-25 — 1.0 space per 10.0 dwelling units
    Dwelling units 26-100 — 1.0 space per 15.0 dwelling units
    Dwelling units 101-200 — 1.0 space per 20.0 dwelling units
    Dwelling units 201+ — 1.0 space per 40.0 dwelling units
  - Long-Term: Dwelling units 1-25 — 1.0 space per 1.0 dwelling units
    Dwelling units 26-100 — 1.0 space per 1.5 dwelling units
    Dwelling units 101-200 — 1.0 space per 2.0 dwelling units
    Dwelling units 201+ — 1.0 space per 4.0 dwelling units

- Restaurant
  - Short-Term:1.0 space per 2,000 sf of retail space
  - Long-Term:1.0 space per 2,000 sf of retail space

Per the LAMC, the Project's proposed 145 dwelling units would require a total of 10 short-term and 97 long-term bicycle parking spaces and the commercial space would require two additional short-term and two additional long-term spaces.

As summarized in Table 11, the total LAMC requirement for the Project is 12 short-term and 99 long-term bicycle parking spaces. The Project's proposed 12 short-term and 99 long-term bicycle spaces meet the LAMC requirements for on-site bicycle parking supply.

TABLE 10
VEHICLE PARKING CODE REQUIREMENTS

Land Use	Size	Code Requirement [a]	Parking Required
Residential [a]	145 du	0.5 space / 1 du	73 spaces
Commercial (Restaurant) [b]	2,400 sf	2 space / 1,000 sf	5 spaces
TOC Tier 3 Reduction [c]		30%	*(2)* spaces
Sub-Total - Commercial			3 spaces
		Total Code Required Parking	**76 spaces**

Notes
sf: square feet
[a] Pursuant to LAMC Section 12.22.A.31, Transit Oriented Communites (TOC) Affordable Housing Incentive Program, required residential parking in a Tier 3 Eligible Housing Development (projects within 0.5 miles of a Metro rail station) shall not exceed 0.5 spaces per unit.
[b] The Project Site is located wtihin a State Enterprise Zone. Therefore, per Section 12.21A4(x)(3), a lower parking ratio of 2 spaces per 1,000 sf may be utilized for commercial uses.
[c] Per LAMC Section 12.22.A.31, TOC Tier 3 mixed-use projects with ground-floor commercial uses can apply up to a 30% reduction to the non-residential parking requirement.

TABLE 11
BICYCLE PARKING CODE REQUIREMENTS

Land Use	Size	Short-Term				Long-Term			
		Rate [a]			Requirement	Rate [a]			Requirement
Residential	25 du	1.0 sp	/	10 du	3 sp	1.0 sp	/	1 du	25 sp
	75 du	1.0 sp	/	15.0 du	5 sp	1.0 sp	/	1.5 du	50 sp
	45 du	1.0 sp	/	20 du	2 sp	1.0 sp	/	2 du	22 sp
Commercial [b]	2,400 sf	1.0 sp	/	2,000 sf	2 sp	1.0 sp	/	2,000 sf	2 sp [c]
Bicycle Parking Requirements				**Short-Term:**	**12 sp**			**Long-Term:**	**99 sp**
Total Bicycle Parking Requirement									**111 sp**

Notes

sp - space

[a] Bicycle requirements as calculated by Section 12.21.A.16 of *Los Angeles Municipal Code*.

[b] Minimum bicycle requirement for restaurant space is two spaces for both short and long-term.

[c] Per Section 12.21.A16(b), any requirement of a fractional bicycle space up to and including 0.5 may be disregarded.

Chapter 5
Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the Project on the local street system. The following summarizes the results of this analysis:

- The Project is located at 905 Beacon Avenue in the City.
- The Project proposes a mixed-use development consisting of 145 apartments and 2,400 sf of ground-floor commercial space. Completion of the Project is anticipated in Year 2023. Two driveways for vehicular access to the Project Site would be provided, one on Beacon Avenue and one on James M. Wood Boulevard.
- The Project is consistent with the City's plans, programs, ordinances, and polices and does not create geometric design hazard impacts.
- The Project does not have significant VMT impacts and is not required to provide mitigation.
- After application of the appropriate trip reduction credits as allowed by LADOT, the Project is anticipated to generate 60 new trips during the morning peak hour and 69 new trips during the afternoon peak hour.
- The Project provides adequate internal circulation to accommodate vehicular, pedestrian, and bicycle traffic without impeding through traffic movements on City streets.
- The Project will incorporate pedestrian and bicycle-friendly designs, such as bicycle parking and open space.
- All construction activities will occur outside of the commuter morning and afternoon peak hours and will not result in significant transportation impacts. A Construction Management Plan will ensure that construction impacts would be less than significant.
- The Project meets the LAMC vehicle and bicycle parking requirements.

References

2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element, Los Angeles Department of City Planning, 2010.

2012 Developer Fee Justification Study, Los Angeles Unified School District, 2012.

CEQA Air Quality Handbook, South Coast Air Quality Management District, 1993.

City of Los Angeles VMT Calculator Documentation, Los Angeles Department of Transportation and Los Angeles Department of City Planning, May 2020.

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City of Los Angeles Urban Design Principles, Los Angeles Department of City Planning, 2011.

City of Los Angeles Walkability Checklist – Guidance for Entitlement Review, Los Angeles Department of City Planning, November 2008.

Citywide Design Guidelines, Los Angeles City Planning Urban Design Studio, October 2019.

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

Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

Interim Guidance for Freeway Safety Analysis, Los Angeles Department of Transportation, May 2020.

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Manual of Policies and Procedures, Los Angeles Department of Transportation, 2008.

Mobility Plan 2035, An Element of the General Plan, Los Angeles Department of City Planning, September 2016.

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan, Los Angeles Department of City Planning, March 2015.

Quantifying Greenhouse Gas Mitigation Measures, California Air Pollution Control Officers Association, 2010.

References, cont.

Redevelopment Plan for the Westlake Recovery Redevelopment Project, Community Redevelopment Agency of the City of Los Angeles, Adopted May 1999.

SCAG Regional Travel Demand Model and 2012 Model Validation, Southern California Association of Governments, March 2016.

State of California Senate Bill 743, Steinberg, 2013.

Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

Transportation Assessment Guidelines, Los Angeles Department of Transportation, July 2020.

Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, 2012.

Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017.

Urban Mobility in a Digital Age: A Transportation Technology Strategy for Los Angeles (Ashley Z. Hand, August 2016.

Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025, City of Los Angeles, August 2015.

Westlake Community Plan, Community Redevelopment Agency of the City of Los Angeles, September 1997.

Appendix A

Memorandum of Understanding

LADOT

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: 905 Beacon Avenue Residential Project

Project Address: 905-919 Beacon Avenue, Los Angeles, CA 90015

Project Description: The Project proposes to construct 145 residential units with 2,400 square feet (sf) of ground-floor commercial uses. The existing surface parking lot on-site would be replaced with the development of the Project.

LADOT Project Case Number: _____ Project Site Plan attached? *(Required)* ■ Yes ☐ No

II. TRIP GENERATION

Geographic Distribution: N 15 % S 25 % E 40 % W 20 %

Illustration of Project trip distribution percentages at Study intersections attached? *(Required)* ■ Yes ☐ No

Trip Generation Rate(s): ITE 10th Edition / Other ITE 10th Edition

Trip Generation Adjustment *(Exact amount of credit subject to approval by LADOT)*	**Yes**	**No**
Transit Usage	☒	☐
Transportation Demand Management	☐	☒
Existing Active Land Use	☐	☒
Previous Land Use	☐	☒
Internal Trip	☒	☐
Pass-By Trip	☒	☐

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ■ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	20	40	60
PM Trips	42	27	69

Daily Trips 589 (From VMT Calculator)

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2023 Ambient Growth Rate: 1 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ■ Yes ☐ No

Map of Study Intersections/Segments attached? ■ Yes ☐ No

STUDY INTERSECTIONS *(May be subject to LADOT revision after access, safety and circulation analysis)*

1 Burlington Avenue & James M. Wood Boulevard
2 Beacon Avenue & James M. Wood Boulevard
3 Beacon Avenue & Olympic Boulevard
4 _____
5 _____
6 _____

Is this Project located on a street within the High Injury Network? ☐ Yes ■ No

IV. ACCESS ASSESSMENT

Is the project on a lot that is 0.5-acre or more in total gross area? ■ 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

V. CONTACT INFORMATION

	CONSULTANT	DEVELOPER
Name:	Gibson Transportation Consulting, Inc.	David M. Page, Triumph Properties Group, LLC
Address:	555 W. 5th Street, Suite 3375, Los Angeles, CA 90013	9601 Wilshire Boulevard, Suite 650, Beverly Hills, CA 90210
Phone Number:	(213) 683-0088	
E-Mail:	sdrobis@gibsontrans.com	dpage@triumphmgmt.com

Approved by:	x	Janet Ge	11/19/19	x		12/3/19
		Consultant's Representative	Date		LADOT Representative	*Date

*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.

TABLE 1
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Rate or Size	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multi-Family Housing (Mid-Rise)	221	per du	26%	74%	0.36	61%	39%	0.44
High-Turnover (Sit-Down) Restaurant	932	per 1,000 sf	55%	45%	9.94	62%	38%	9.77
Trip Generation Estimates								
Multi-Family Housing (Mid-Rise)	221	145 du	14	38	52	39	25	64
Transit/Walk Adjustment - 15% [b]			*(2)*	*(6)*	*(8)*	*(6)*	*(4)*	*(10)*
Commercial	932	2,400 sf	13	11	24	14	9	23
Internal Capture - 5% [c]			*(1)*	*0*	*(1)*	*(1)*	*0*	*(1)*
Transit/Walk Adjustment - 15% [b]			*(2)*	*(1)*	*(3)*	*(2)*	*(1)*	*(3)*
Pass-By Adjustment - 20% [d]			*(2)*	*(2)*	*(4)*	*(2)*	*(2)*	*(4)*
TOTAL PROJECT TRIPS			**20**	**40**	**60**	**42**	**27**	**69**

Notes:

du = dwelling unit; sf = square feet.

[a] Trip generation rates are from *Trip Generation, 10th Edition* (Institute of Transportation Engineers, 2017).

[b] Per LADOT's *Transportation Assessment Guidelines,* the Project Site is located within a 1/4 mile walking distance from the Metro Route 728 RapidBus stop at Olympic Boulevard and Union Avenue, therefore a transit reduction is applied to accountfor transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.

[c] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development without using an off-site road system (e.g., residents visiting commercial uses).

[e] Per LADOT's *Transportation Assessment Guidelines* , pass-by adjustment of 20% is applied to account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

TABLE 2
RELATED PROJECT TRIP GENERATION ESTIMATES

No.	Project	Address	Description	Trip Generation Estimates						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
1.	Hotel Olympia	1700 W Olympic Bl	160-room hotel	1,157	44	32	76	45	42	87
2.	Restaurants & Bar	1728 W 7th St	9,600 sf restaurant and 3,500 sf bar	362	-30	-40	-70	50	17	64
3.	1633 W 11th Street Charter School (K-5)	1633 W 11th St	460-student K-5 charter school	970	194	158	352	29	37	66
4.	2005 James M Wood Hotel	2005 James M Wood Bl	100-room hotel	545	24	18	42	20	18	38

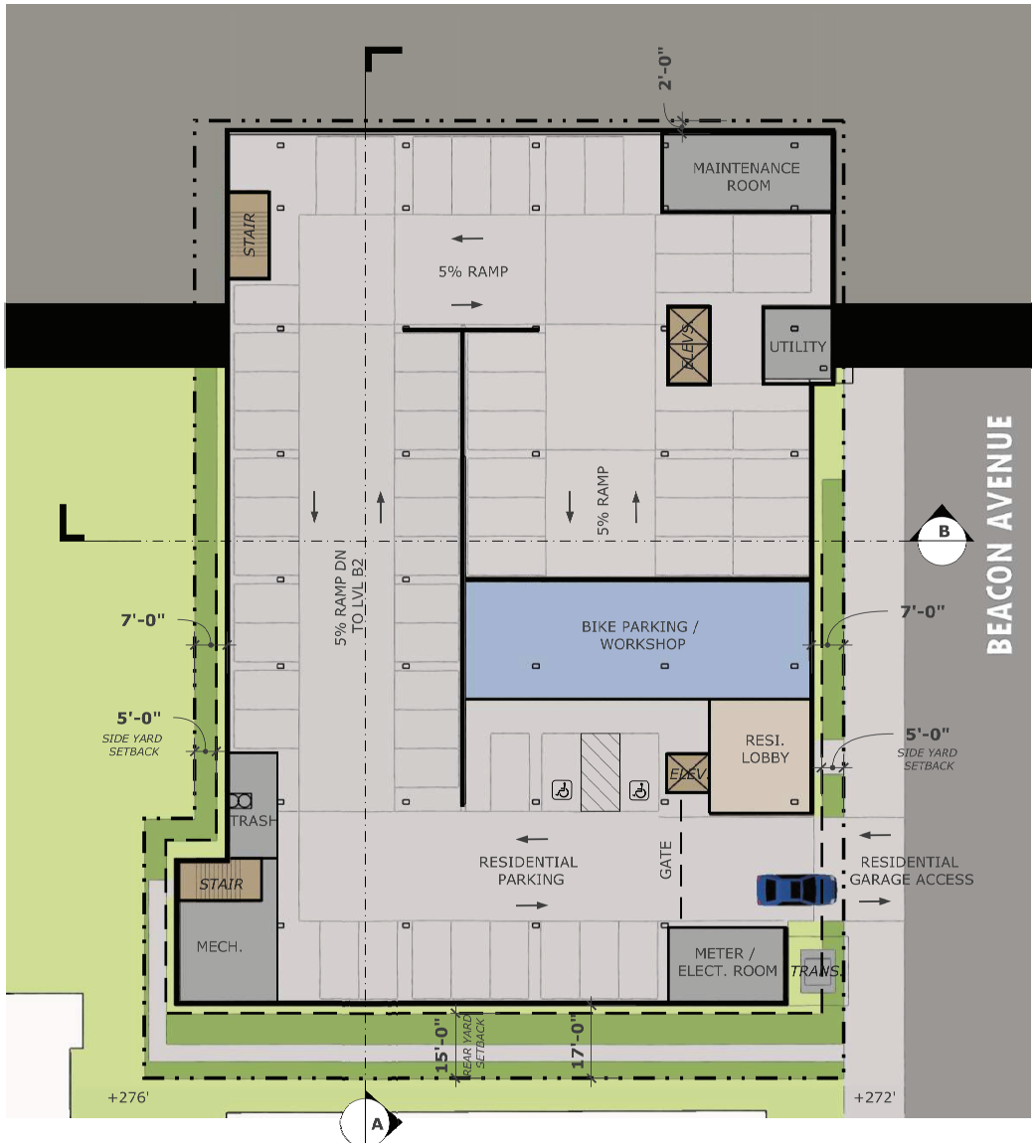
Notes

[a] Related project information provided by the Los Angeles Department of Transportation in October 2019, Department of City Planning, and recent traffic studies prepared in the area.

Source: NEXT Architecture. October, 2019.

PROJECT SITE PLAN (GROUND FLOOR)

FIGURE 1A

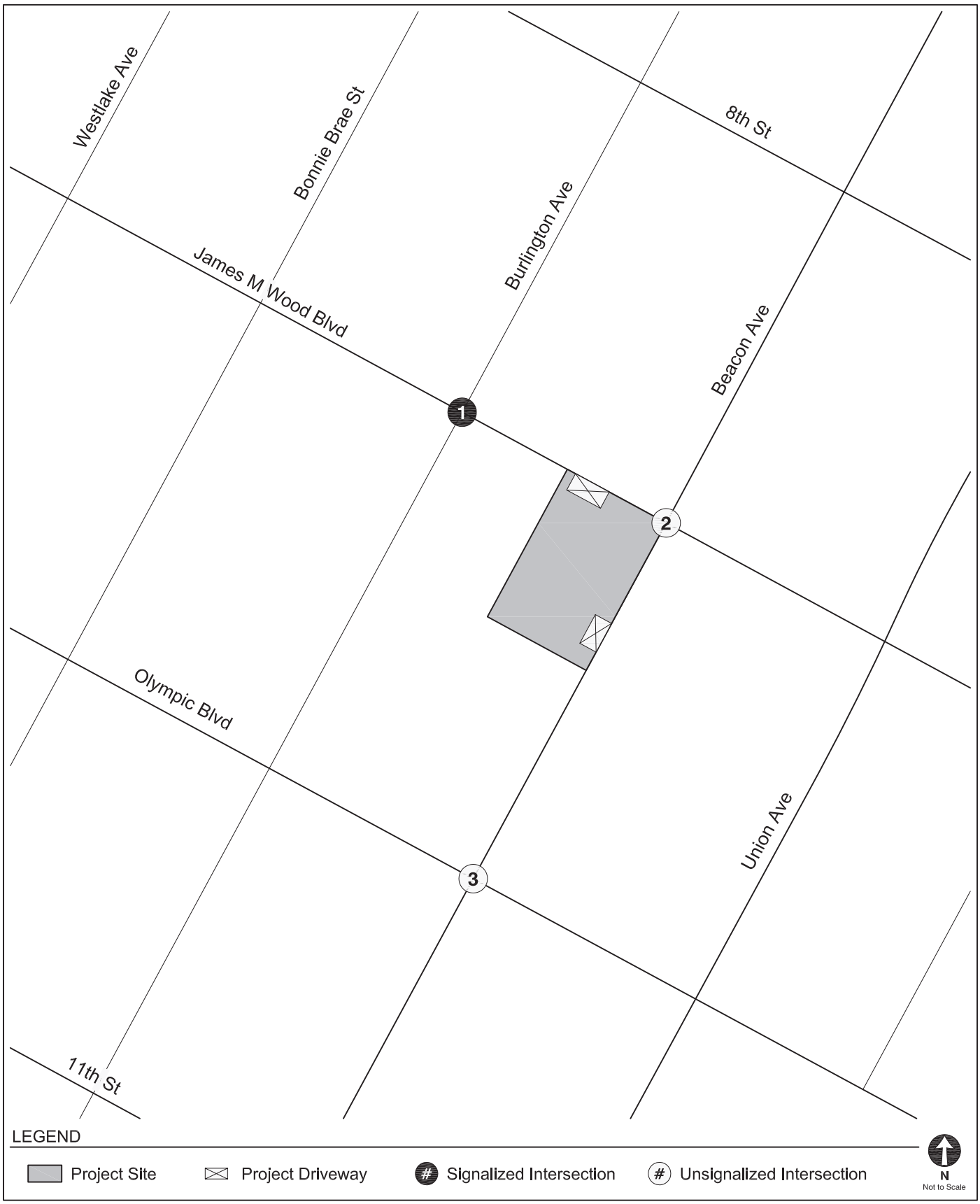


Source: NEXT Architecture. October, 2019.

N
Not to Scale

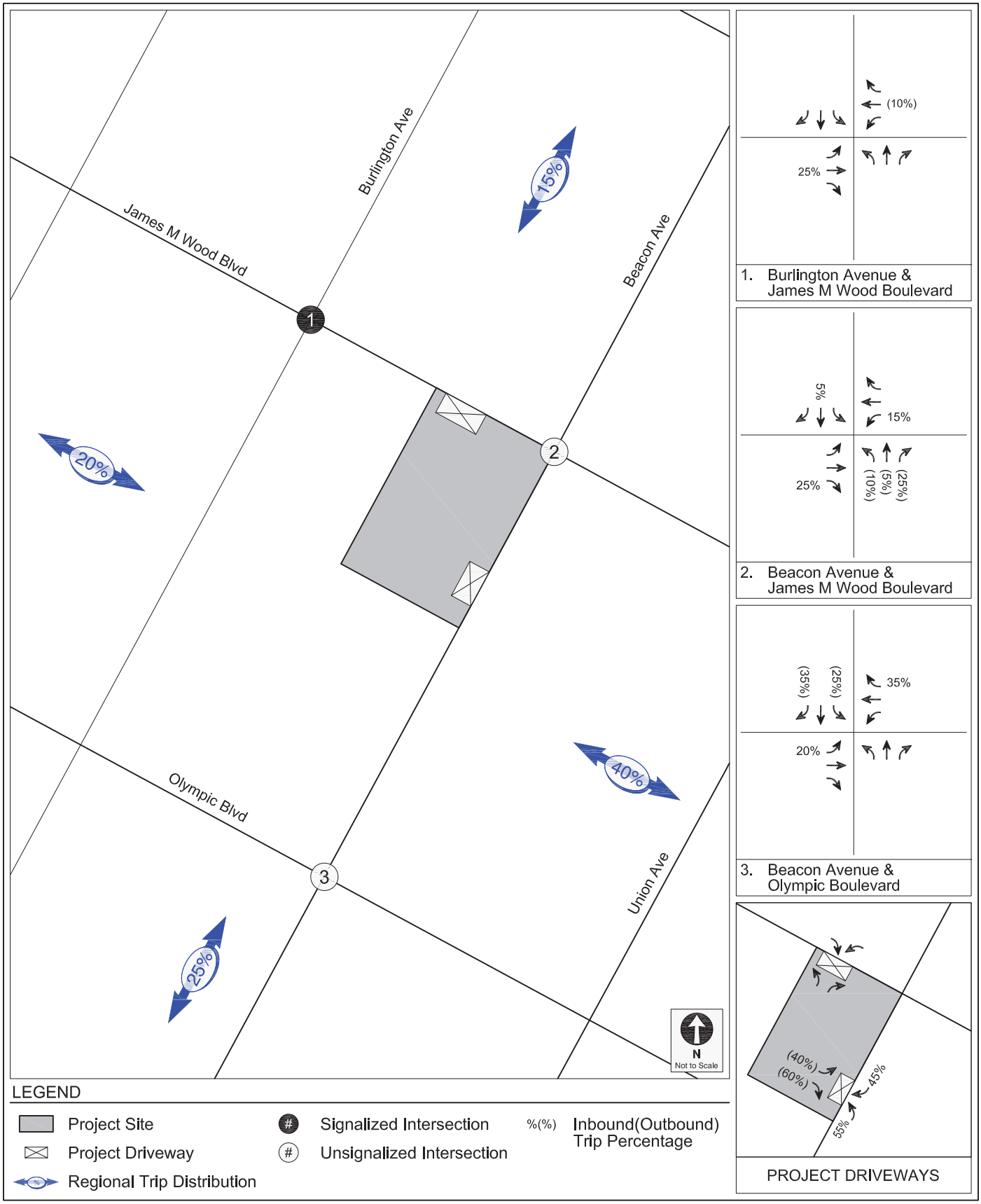
PROJECT SITE PLAN (LEVEL B1)

FIGURE 1B



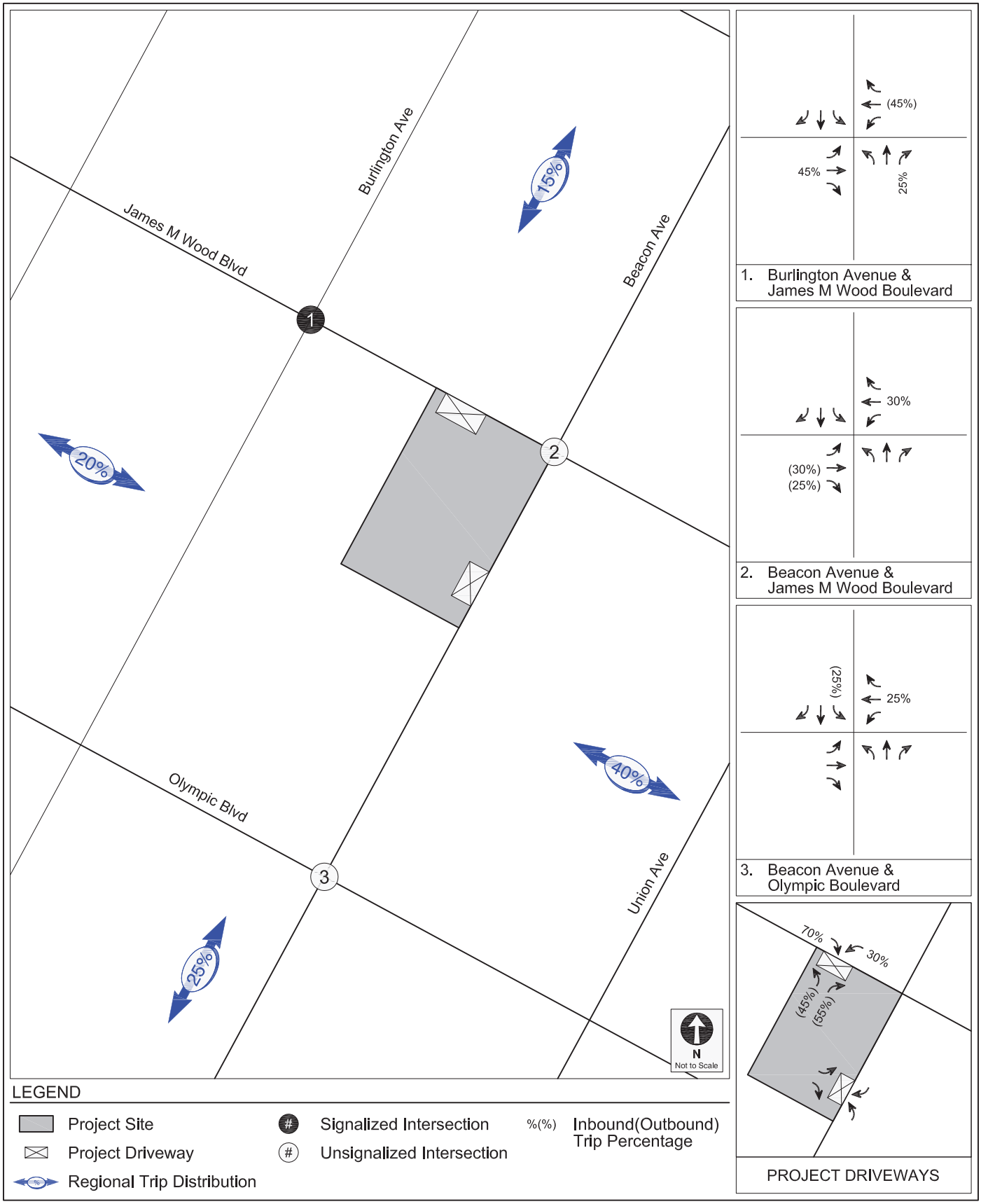
STUDY AREA & ANALYZED INTERSECTIONS

FIGURE 2



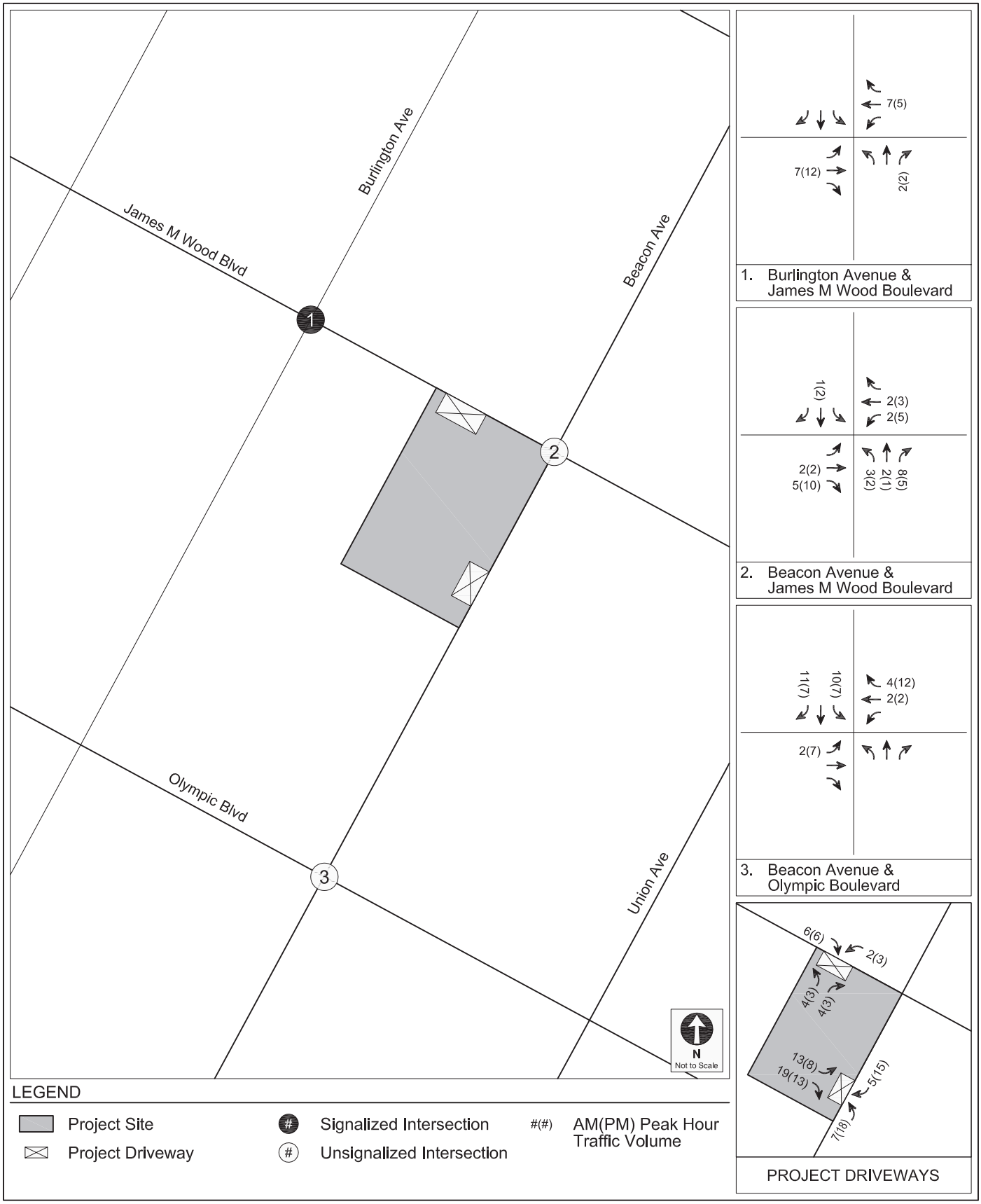
PROJECT TRIP DISTRIBUTION
RESIDENTIAL

FIGURE
3A



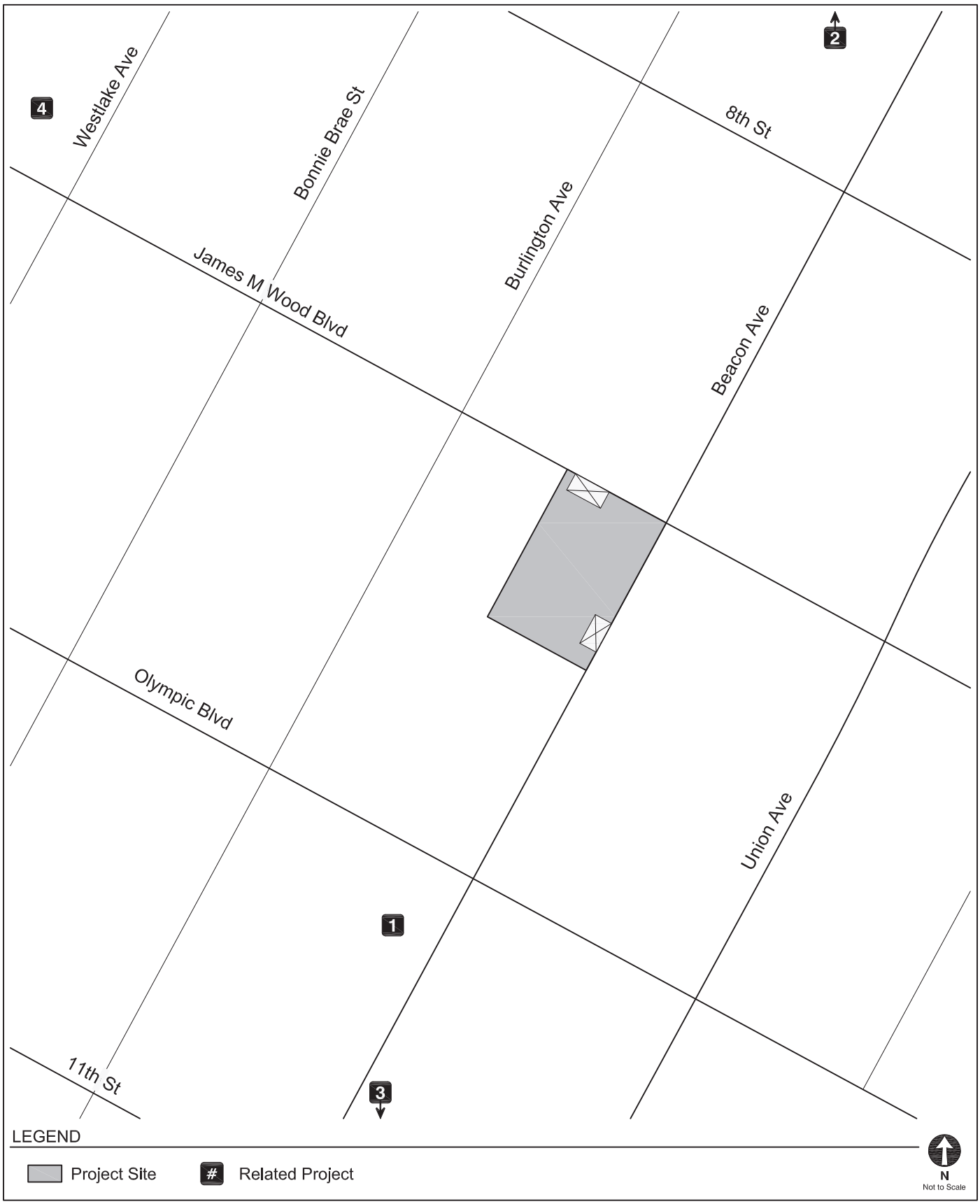
PROJECT TRIP DISTRIBUTION
COMMERCIAL

FIGURE
3B



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
4



LOCATIONS OF RELATED PROJECTS

FIGURE 5

Appendix B

Traffic Volume Data

Turning Movement Count Report AM

Location ID: 1
North/South: Burlington Avenue
East/West: James M. Wood Blvd

Date: 01/14/20
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	6	17	4	4	52	7	6	32	10	4	62	3	207
7:15	5	28	8	8	58	3	4	56	22	3	89	10	294
7:30	13	23	15	10	64	5	4	81	19	12	124	5	375
7:45	7	35	9	9	79	9	4	58	24	9	161	10	414
8:00	18	43	5	4	68	5	6	43	14	12	126	9	353
8:15	13	25	7	5	49	5	5	34	8	8	165	6	330
8:30	9	24	8	4	38	3	6	32	12	4	122	9	271
8:45	5	15	6	4	47	2	8	38	12	5	135	3	280
9:00	4	17	3	1	42	1	6	36	8	0	109	2	229
9:15	8	18	4	5	51	3	4	25	8	5	107	4	242
9:30	5	15	3	3	38	5	4	27	6	4	25	3	138
9:45	7	14	1	3	41	6	5	14	4	6	76	2	179

Total Volume:	100	274	73	60	627	54	62	476	147	72	1301	66	3312
Approach %	22%	61%	16%	8%	85%	7%	9%	69%	21%	5%	90%	5%	

Peak Hr Begin:	7:30												
PHV	51	126	36	28	260	24	19	216	65	41	576	30	1472
PHF	0.807			0.804			0.721			0.899			0.889

Turning Movement Count Report PM

Location ID: 1
North/South: Burlington Avenue
East/West: James M. Wood Blvd

Date: 01/14/20
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	13	38	3	7	44	3	5	23	6	5	112	8	267
15:15	18	41	4	3	58	11	6	38	4	6	121	11	321
15:30	8	29	8	5	54	9	4	43	7	8	139	9	323
15:45	11	33	2	6	56	4	6	40	9	3	136	18	324
16:00	13	52	2	7	44	8	5	41	5	8	123	16	324
16:15	13	64	2	7	53	5	11	40	14	7	124	29	369
16:30	6	49	3	10	49	10	9	48	17	8	125	16	350
16:45	12	63	6	5	72	3	2	57	16	12	123	17	388
17:00	15	63	7	9	88	7	9	57	8	7	103	16	389
17:15	17	67	6	16	69	13	13	60	17	12	120	17	427
17:30	15	60	5	7	80	12	11	60	21	9	103	30	413
17:45	22	62	4	8	77	11	13	20	15	4	124	25	385

Total Volume:	163	621	52	90	744	96	94	527	139	89	1453	212	4280
Approach %	19%	74%	6%	10%	80%	10%	12%	69%	18%	5%	83%	12%	

Peak Hr Begin:	16:45												
PHV	59	253	24	37	309	35	35	234	62	40	449	80	1617
PHF	0.933			0.916			0.899			0.936			0.947

Pedestrian/Bicycle Count Report

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	2	0	11	0	9	1	12	0
7:15	21	2	19	0	13	1	5	0
7:30	10	0	28	0	11	0	19	1
7:45	14	0	10	0	16	0	18	0
8:00	15	1	5	0	8	1	10	0
8:15	10	0	6	0	4	1	4	0
8:30	5	0	4	0	7	1	5	0
8:45	5	1	3	0	6	2	3	0
9:00	8	0	7	0	2	0	6	0
9:15	10	0	4	0	7	0	2	0
9:30	8	0	3	0	8	2	0	0
9:45	8	2	7	0	3	0	21	0

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	15	0	9	2	3	0	10	0
15:15	11	0	15	2	11	1	12	0
15:30	18	0	11	0	7	0	7	0
15:45	7	1	8	0	10	1	13	1
16:00	7	0	9	0	14	0	9	0
16:15	6	2	5	3	14	0	11	0
16:30	18	5	3	2	11	1	15	0
16:45	11	0	8	0	12	2	13	1
17:00	21	1	15	0	10	0	8	1
17:15	10	1	7	0	12	0	21	0
17:30	14	0	6	0	7	0	21	0
17:45	21	0	17	1	5	1	9	0

Turning Movement Count Report AM

Location ID: 2
North/South: Beacon Avenue
East/West: James M. Wood Blvd

Date: 01/14/20
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	8	2	3	4	53	6	7	4	3	5	51	1	147
7:15	4	4	2	3	52	2	9	4	7	5	99	2	193
7:30	6	8	3	2	72	4	18	5	10	7	128	8	271
7:45	4	3	6	5	78	2	18	6	9	4	155	12	302
8:00	8	6	1	12	61	5	8	6	6	7	129	9	258
8:15	6	1	2	9	49	4	11	7	6	11	156	10	272
8:30	3	2	0	8	42	5	11	8	3	6	119	7	214
8:45	3	4	2	10	43	5	10	13	2	6	128	10	236
9:00	2	1	3	14	42	8	13	10	2	10	96	5	206
9:15	2	2	1	10	51	9	12	8	1	4	107	8	215
9:30	1	4	1	5	44	3	14	11	2	6	82	9	182
9:45	6	2	1	5	36	6	12	8	5	4	77	3	165

Total Volume:	53	39	25	87	623	59	143	90	56	75	1327	84	2661
Approach %	45%	33%	21%	11%	81%	8%	49%	31%	19%	5%	89%	6%	

Peak Hr Begin:	7:30												
PHV	24	18	12	28	260	15	55	24	31	29	568	39	1103
PHF	0.794			0.891			0.833			0.898			0.913

Turning Movement Count Report PM

Location ID: 2
North/South: Beacon Avenue
East/West: James M. Wood Blvd

Date: 01/14/20
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	3	6	4	7	43	0	24	9	8	9	109	5	227
15:15	8	2	2	2	57	7	11	11	3	4	111	10	228
15:30	6	3	2	5	56	9	23	6	6	8	126	12	262
15:45	4	3	2	6	55	5	15	9	4	8	125	4	240
16:00	7	2	3	4	50	3	18	9	6	7	119	12	240
16:15	12	2	0	6	51	4	26	5	3	7	103	10	229
16:30	9	5	3	5	51	2	24	10	5	2	122	15	253
16:45	8	6	0	8	73	2	24	17	4	10	111	10	273
17:00	18	9	4	8	72	7	28	16	7	7	96	13	285
17:15	15	9	4	5	73	6	25	16	12	12	105	12	294
17:30	17	11	1	3	72	7	35	19	4	6	98	11	284
17:45	22	17	0	7	76	7	28	26	8	6	110	26	333
Total Volume:	129	75	25	66	729	59	281	153	70	86	1335	140	3148
Approach %	56%	33%	11%	8%	85%	7%	56%	30%	14%	6%	86%	9%	
Peak Hr Begin:	17:00												
PHV	72	46	9	23	293	27	116	77	31	31	409	62	1196
PHF	0.814			0.953			0.903			0.884			0.898

Pedestrian/Bicycle Count Report

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	4	1	2	0	4	1	3	0
7:15	17	2	6	0	9	0	3	0
7:30	21	1	0	0	9	0	7	0
7:45	24	1	4	0	19	0	3	1
8:00	13	2	9	0	10	0	2	1
8:15	4	0	8	1	2	0	2	0
8:30	5	0	7	0	3	1	2	0
8:45	3	1	19	0	1	1	3	0
9:00	7	0	17	0	1	0	2	0
9:15	6	0	2	1	5	0	1	0
9:30	6	1	9	0	4	1	1	0
9:45	4	0	29	0	2	0	3	0

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	10	1	11	0	2	1	2	0
15:15	7	2	6	0	5	1	0	0
15:30	5	0	9	0	3	0	2	0
15:45	12	1	3	0	7	0	3	0
16:00	4	0	9	2	6	0	1	0
16:15	9	0	1	0	5	1	3	0
16:30	14	1	6	1	8	1	5	0
16:45	11	1	2	1	5	0	2	0
17:00	11	1	7	0	8	1	2	0
17:15	11	1	5	0	6	0	1	0
17:30	7	1	1	0	12	0	2	0
17:45	7	0	3	0	5	1	1	0

Turning Movement Count Report AM

Location ID: 3
North/South: Beacon Avenue
East/West: Olympic Blvd

Date: 01/14/20
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	7	1	2	7	233	1	17	1	17	7	226	8	527
7:15	5	2	1	9	248	3	51	5	21	12	303	9	669
7:30	9	0	1	14	246	0	45	1	23	14	365	22	740
7:45	5	1	7	15	279	2	12	1	0	4	396	17	739
8:00	10	1	3	19	284	1	9	0	2	3	406	13	751
8:15	8	1	3	12	216	2	4	2	1	3	428	21	701
8:30	6	2	1	20	265	1	3	1	0	4	438	18	759
8:45	10	3	1	10	300	7	0	3	0	1	422	16	773
9:00	10	2	8	23	220	8	1	1	1	2	355	17	648
9:15	7	1	4	10	270	3	4	1	0	0	328	18	646
9:30	7	2	5	14	243	1	3	4	3	2	347	14	645
9:45	5	1	6	16	232	4	1	2	1	3	268	21	560

Total Volume:	89	17	42	169	3036	33	150	22	69	55	4282	194	8158
Approach %	60%	11%	28%	5%	94%	1%	62%	9%	29%	1%	95%	4%	

Peak Hr Begin:	8:00												
PHV	34	7	8	61	1065	11	16	6	3	11	1694	68	2984
PHF	0.875			0.897			0.568			0.964			0.965

Turning Movement Count Report PM

Location ID: 3
North/South: Beacon Avenue
East/West: Olympic Blvd

Date: 01/14/20
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	15	3	4	13	166	5	5	1	1	5	310	10	538
15:15	12	3	3	16	215	1	7	4	1	9	374	7	652
15:30	16	1	3	6	217	8	43	2	17	9	350	15	687
15:45	10	2	4	12	201	4	7	0	1	5	377	21	644
16:00	12	2	6	7	247	5	6	1	3	5	372	18	684
16:15	11	2	6	8	235	2	1	2	1	7	385	11	671
16:30	9	5	6	18	249	4	5	3	4	6	388	18	715
16:45	18	3	8	11	269	11	4	0	0	11	362	10	707
17:00	29	4	7	18	275	15	6	1	6	7	382	20	770
17:15	22	4	5	13	268	1	6	3	1	6	386	28	743
17:30	24	5	8	14	330	8	11	1	1	10	396	33	841
17:45	24	4	5	23	281	5	11	3	5	11	337	32	741
Total Volume:	202	38	65	159	2953	69	112	21	41	91	4419	223	8393
Approach %	66%	12%	21%	5%	93%	2%	64%	12%	24%	2%	93%	5%	
Peak Hr Begin:	17:00												
PHV	99	17	25	68	1154	29	34	8	13	34	1501	113	3095
PHF	0.881			0.888			0.724			0.938			0.920

Pedestrian/Bicycle Count Report

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	7	0	0	0	11	2	1	0
7:15	9	1	0	0	34	1	0	0
7:30	24	0	2	0	33	0	1	0
7:45	15	0	1	0	20	2	3	0
8:00	14	0	2	1	21	0	0	0
8:15	7	0	0	0	9	1	0	0
8:30	5	0	0	0	10	1	0	0
8:45	8	1	0	0	5	3	0	0
9:00	10	1	3	0	12	0	3	0
9:15	17	0	3	0	14	1	0	0
9:30	14	0	4	0	7	1	1	0
9:45	22	0	3	0	3	2	0	0

Leg:	*North*		*East*		*South*		*West*	
Class:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	18	0	3	0	14	2	2	0
15:15	13	0	2	0	26	1	1	0
15:30	13	2	4	0	29	4	3	0
15:45	16	0	1	0	21	3	0	0
16:00	11	1	1	0	15	3	2	0
16:15	23	0	1	0	21	2	3	0
16:30	13	2	2	0	22	1	3	0
16:45	14	1	3	0	18	2	3	0
17:00	26	1	3	0	17	3	2	0
17:15	11	0	0	0	17	2	3	0
17:30	10	1	2	0	6	2	0	0
17:45	14	2	1	0	7	1	1	0

Appendix C

Plan, Policy, and Program Consistency Worksheet

Plans, Policies and Programs Consistency Worksheet

The worksheet provides a structured approach to evaluate the threshold T-1 question below, that asks whether a project conflicts with a program, plan, ordinance or policy addressing the circulation system. The intention of the worksheet is to streamline the project review by highlighting the most relevant plans, policies and programs when assessing potential impacts to the City's circulation system.

> Threshold T-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

This worksheet does not include an exhaustive list of City policies, and does not include community plans, specific plans, or any area-specific regulatory overlays. The Department of City Planning project planner will need to be consulted to determine if the project would obstruct the City from carrying out a policy or program in a community plan, specific plan, streetscape plan, or regulatory overlay that was adopted to support multimodal transportation options or public safety. LADOT staff should be consulted if a project would lead to a conflict with a mobility investment in the Public Right of Way (PROW) that is currently undergoing planning, design, or delivery. This worksheet must be completed for all projects that meet the Section I. Screening Criteria. For description of the relevant planning documents, **see Attachment D.1.**

For any response to the following questions that checks the box in bold text ((i.e. ☐ Yes or ☐ No), further analysis is needed to demonstrate that the project does not conflict with a plan, policy, or program.

I. SCREENING CRITERIA FOR POLICY ANALYSIS

If the answer is 'yes' to any of the following questions, further analysis will be required:

Does the project require a discretionary action that requires the decision maker to find that the project would substantially conform to the purpose, intent and provisions of the General Plan?

☐ Yes ☑ No

Is the project known to directly conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety?

☐ Yes ☑ 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.)?

☑ Yes ☐ No

II. PLAN CONSISTENCY ANALYSIS

A. Mobility Plan 2035 PROW Classification Standards for Dedications and Improvements

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 *– Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.*

Mobility Plan 2035 Policy 2.3 *– Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.*

Mobility Plan 2035 Policy 3.2 – *People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.*

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

A.1 Does the project include additions or new construction along a street designated as a Boulevard I, and II, and/or Avenue I, II, or III on property zoned for R3 or less restrictive zone? ☑ Yes ☐ No

A.2 If **A.1 is yes**, is the project required to make additional dedications or improvements to the Public Right of Way as demonstrated by the street designation. ☑ Yes ☐ No ☐ N/A

A.3 If **A.2 is yes**, is the project making the dedications and improvements as necessary to meet the designated dimensions of the fronting street (Boulevard I, and II, or Avenue I, II, or III)?

☑ Yes ☐ No ☐ N/A

If the answer is to **A.1 or A.2 is NO, or to A.1, A.2 and A.3. is YES**, then the project does not conflict with the dedication and improvement requirements that are needed to comply with the Mobility Plan 2035 Street Designations and Standard Roadway Dimensions.

A.4 If the answer to **A.3. is NO**, is the project applicant asking to waive from the dedication standards?

☐ **Yes** ☐ **No** ☑ N/A

Lists any streets subject to dedications or voluntary dedications and include existing roadway and sidewalk widths, required roadway and sidewalk widths, and proposed roadway and sidewalk width or waivers.

James M. Wood Boulevard

Frontage 1 Existing PROW'/Curb' : Existing 35' Required 36' Proposed 36'

Frontage 2 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Frontage 3 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Frontage 4 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

If the answer to **A.4 is NO**, the project is inconsistent with Mobility Plan 2035 street designations and must file for a waiver of street dedication and improvement.

If the answer to **A.4 is YES**, additional analysis is necessary to determine if the dedication and/or improvements are necessary to meet the City's mobility needs for the next 20 years. The following factors may contribute to determine if the dedication or improvement is necessary:

Is the project site along any of the following networks identified in the City's Mobility Plan?

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network

To see the location of the above networks, see **Transportation Assessment Support Map**.[1]

Is the project within the service area of Metro Bike Share, or is there demonstrated demand for micro-mobility services?

If the project dedications and improvements asking to be waived are necessary to meet the City's mobility needs, the project may be found to conflict with a plan that is adopted to protect the environment.

B. Mobility Plan 2035 PROW Policy Alignment with Project-Initiated Changes

B.1 Project-Initiated Changes to the PROW Dimensions

These questions address potential conflict with:

> ***Mobility Plan 2035 Policy 2.1*** *– Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.*
>
> ***Mobility Plan 2035 Policy 2.3*** *– Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.*
>
> ***Mobility Plan 2035 Policy 3.2 –*** *People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.*
>
> ***Mobility Plan 2035 Policy 2.10*** *– Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.*
>
> **Mobility Plan 2035 Street Designations and Standard Roadway Dimensions**

[1] LADOT Transportation Assessment Support Map https://arcg.is/fubbD

B.1 Does the project physically modify the curb placement or turning radius and/or physically alter the sidewalk and parkways space that changes how people access a property?

Examples of physical changes to the public right-of-way include:

- widening the roadway,
- narrowing the sidewalk,
- adding space for vehicle turn outs or loading areas,
- removing bicycle lanes, bike share stations, or bicycle parking
- modifying existing bus stop, transit shelter, or other street furniture
- paving, narrowing, shifting or removing an existing parkway or tree well

☐ **Yes** ☑ No

B.2 Driveway Access

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.10 *– Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.*

Mobility Plan 2035 Program PL.1. Driveway Access. *Require driveway access to buildings from non-arterial streets or alleys (where feasible) in order to minimize interference with pedestrian access and vehicular movement.*

Citywide Design Guidelines - Guideline 2*: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.*

Site Planning Best Practices:

- *Prioritize pedestrian access first and automobile access second. Orient parking and driveways toward the rear or side of buildings and away from the public right-of-way. On corner lots, parking should be oriented as far from the corner as possible.*
- *Minimize both the number of driveway entrances and overall driveway widths.*
- *Do not locate drop-off/pick-up areas between principal building entrances and the adjoining sidewalks.*
- *Orient vehicular access as far from street intersections as possible.*
- *Place drive-thru elements away from intersections and avoid placing them so that they create a barrier between the sidewalk and building entrance(s).*
- *Ensure that loading areas do not interfere with on-site pedestrian and vehicular circulation by separating loading areas and larger commercial vehicles from areas that are used for public parking and public entrances.*

B.2 Does the project add new driveways along a street designated as an Avenue or a Boulevard that conflict with LADOT's Driveway Design Guidelines (See Sec. 321 in the Manual of Policies and Procedures) by any of the following:

- locating new driveways for residential properties on an Avenue or Boulevard, and access is otherwise possible using an alley or a collector/local street, or
- locating new driveways for industrial or commercial properties on an Avenue or Boulevard and access is possible along a collector/local street, or

- the total number of new driveways exceeds 1 driveway per every 200 feet[2] along on the Avenue or Boulevard frontage, or
- locating new driveways on an Avenue or Boulevard within 150 feet from the intersecting street, or
- locating new driveways on a collector or local street within 75 feet from the intersecting street, or
- locating new driveways near mid-block crosswalks, requiring relocation of the mid-block crosswalk

☐ **Yes** ☑ No

If the answer to **B.1 and B.2 are both NO**, then the project would not conflict with a plan or policies that govern the PROW as a result of the project-initiated changes to the PROW.

Impact Analysis

If the answer to either **B.1 or B.2 are YES**, City plans and policies should be reviewed in light of the proposed physical changes to determine if the City would be obstructed from carrying out the plans and policies. The analysis should pay special consideration to substantial changes to the Public Right of Way that may either degrade existing facilities for people walking and bicycling (e.g., removing a bicycle lane), or preclude the City from completing complete street infrastructure as identified in the Mobility Plan 2035, especially if the physical changes are along streets that are on the High Injury Network (HIN). The analysis should also consider if the project is in a Transit Oriented Community (TOC) area, and would degrade or inhibit trips made by biking, walking and/ or transit ridership. The streets that need special consideration are those that are included on the following networks identified in the Mobility Plan 2035, or the HIN:

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network
- High Injury Network

To see the location of the above networks, see **Transportation Assessment Support Map**.[3]

Once the project is reviewed relevant to plans and policies, and existing facilities that may be impacted by the project, the analysis will need to answer the following two questions in concluding if there is an impact due to plan inconsistency.

B.2.1 Would the physical changes in the public right of way or new driveways that conflict with LADOT's Driveway Design Guidelines degrade the experience of vulnerable roadway users such as modify, remove, or otherwise negatively impact existing bicycle, transit, and/or pedestrian infrastructure?

☐ **Yes** ☑ No ☐ N/A

[2] for a project frontage that exceeds 400 feet along an Avenue or Boulevard, the incremental additional driveway above 2 is more than 1 driveway for every 400 additional feet.

[3] LADOT Transportation Assessment Support Map https://arcg.is/fubbD

B.2.2 Would the physical modifications or new driveways that conflict with LADOT's Driveway Design Guidelines preclude the City from advancing the safety of vulnerable roadway users?

☐ **Yes** ☑ No ☐ N/A

If either of the answers to either **B.2.1 or B.2.2 are YES**, the project may conflict with the Mobility Plan 2035, and therefore conflict with a plan that is adopted to protect the environment. If either of the answers to both **B.2.1. or B.2.2. are NO**, then the project would not be shown to conflict with plans or policies that govern the Public Right-of-Way.

C. Network Access

C. 1 Alley, Street and Stairway Access

These questions address potential conflict with:

Mobility Plan Policy 3.9 *Increased Network Access: Discourage the vacation of public rights-of-way.*

C.1.1 Does the project propose to vacate or otherwise restrict public access to a street, alley, or public stairway?

☐ Yes ☑ No

C.1.2 If the answer to C.1.1 is Yes, will the project provide or maintain public access to people walking and biking on the street, alley or stairway?

☐ Yes ☐ **No** ☑ N/A

C.2 New Cul-de-sacs

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.10 *Cul-de-sacs: Discourage the use of cul-de-sacs that do not provide access for active transportation options.*

C.2.1 Does the project create a cul-de-sac or is the project located adjacent to an existing cul-de-sac?

☐ Yes ☑ No

C.2.2 If yes, will the cul-de-sac maintain convenient and direct public access to people walking and biking to the adjoining street network?

☐ Yes ☐ **No** ☑ N/A

If the answers to either C.1.2 or C.2.2 are YES, then the project would not conflict with a plan or policies that ensures access for all modes of travel. If the answer to either **C.1.2 or C.2.2 are NO**, the project may conflict with a plan or policies that governs multimodal access to a property. Further analysis must assess to the degree that pedestrians and bicyclists have sufficient public access to the transportation network.

D. Parking Supply and Transportation Demand Management

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.8 *– Bicycle Parking, Provide bicyclists with convenient, secure and well maintained bicycle parking facilities.*

Mobility Plan 2035 Policy 4.8 – *Transportation Demand Management Strategies. Encourage greater utilization of Transportation Demand Management Strategies to reduce dependence on single-occupancy vehicles.*

Mobility Plan 2035 Policy 4.13 *– Parking and Land Use Management: Balance on-street and off-street parking supply with other transportation and land use objectives.*

D.1 Would the project propose a supply of onsite parking that exceeds the baseline amount[4] as required in the Los Angeles Municipal Code or a Specific plan, whichever requirement prevails?

☐ Yes ☑ No

D.2 If the answer to D.1. is YES, would the project propose to actively manage the demand of parking by independently pricing the supply to all users (e.g. parking cash-out), or for residential properties, unbundle the supply from the lease or sale of residential units?

☐ Yes ☐ **No** ☑ N/A

If the answer to **D.2. is NO** the project may conflict with parking management policies. Further analysis is needed to demonstrate how the supply of parking above city requirements will not result in additional (induced) drive-alone trips as compared to an alternative that provided no more parking than the baseline required by the LAMC or Specific Plan. If there is potential for the supply of parking to result in induced demand for drive-alone trips, the project should further explore transportation demand management (TDM) measures to further off-set the induced demands of driving and vehicle miles travelled (VMT) that may result from higher amounts of on-site parking. The TDM measures should specifically focus on strategies that encourage dynamic and context-sensitive pricing solutions and ensure the parking is efficiently allocated, such as providing real time information. Research has demonstrated that charging a user cost for parking or providing a 'cash-out' option in return for not using it is the most effective strategy to reduce the instances of drive-alone trips and increase non-auto mode share to further reduce VMT. To ensure the parking is efficiently managed and reduce the need to build parking for future uses, further strategies should include sharing parking with other properties and/or the general public.

D.3. Would the project provide the minimum on and off-site bicycle parking spaces as required by Section 12.21 A.16 of the LAMC?

☑ Yes ☐ **No**

[4] The baseline parking is defined here as the default parking requirements in section 12.21 A.4 of the Los Angeles Municipal Code or any applicable Specific Plan, whichever prevails, for each applicable use not taking into consideration other parking incentives to reduce the amount of required parking.

D.4. Does the Project include more than 25,000 square feet of gross floor area construction of new non-residential gross floor?

☐ Yes ☑ No

D.5 If the answer to D.4. is YES, does the project comply with the City's TDM Ordinance in Section 12.26 J of the LAMC?

☐ Yes ☐ **No** ☑ N/A

If the answer to **D.3. or D.5. is NO** the project conflicts with LAMC code requirements of bicycle parking and TDM measures. If the project includes uses that require bicycle parking (Section 12.21 A.16) or TDM (Section 12.26 J), and the project does not comply with those Sections of the LAMC, further analysis is required to ensure that the project supports the intent of the two LAMC sections. To meet the intent of bicycle parking requirements, the analysis should identify how the project commits to providing safe access to those traveling by bicycle and accommodates storing their bicycle in locations that demonstrates priority over vehicle access.

Similarly, to meet the intent of the TDM requirements of Section 12.26 J of the LAMC, the analysis should identify how the project commits to providing effective strategies in either physical facilities or programs that encourage non-drive alone trips to and from the project site and changes in work schedule that move trips out of the peak period or eliminate them altogether (as in the case in telecommuting or compressed work weeks).

E. Consistency with Regional Plans

This section addresses potential inconsistencies with greenhouse gas (GHG) reduction targets forecasted in the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS).

E.1 Does the Project or Plan apply one the City's efficiency-based impact thresholds (i.e. VMT per capita, VMT per employee, or VMT per service population) as discussed in Section 2.2.3 of the TAG?

☑ Yes ☐ No

E.2 If the Answer to E.1 is YES, does the Project or Plan result in a significant VMT impact?

☐ Yes ☑ No ☐ N/A

E.3 If the Answer to E.1 is NO, does the Project result in a net increase in VMT?

☑ Yes ☐ No ☐ N/A

If the Answer to E.2 or E.3 is NO, then the Project or Plan is shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS.

E.4 If the Answer to E.2 or E.3 is YES, then further evaluation would be necessary to determine whether such a project or land use plan would be shown to be consistent with VMT and GHG reduction goals of the SCAG RTP/SCS. For the purpose of making a finding that a project is consistent with the GHG reduction targets forecasted in the SCAG RTP/SCS, the project analyst should consult Section 2.2.4 of the Transportation Assessment Guidelines (TAG). Section 2.2.4 provides the methodology for evaluating a land use project's cumulative impacts to VMT, and the appropriate reliance on SCAG's most recently adopted RTP/SCS in reaching that conclusion.

The analysis methods therein can further support findings that the project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy for which the State Air Resources Board, pursuant to Section 65080(b)(2)(H) of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

References

BOE Street Standard Dimensions S-470-1 http://eng2.lacity.org/techdocs/stdplans/s-400/S-470-1_20151021_150849.pdf

LADCP Citywide Design Guidelines. https://planning.lacity.org/odocument/f6608be7-d5fe-4187-bea6-20618eec5049/Citywide_Design_Guidelines.pdf

LADOT Transportation Assessment Support Map https://arcg.is/fubbD

Mobility Plan 2035 https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf

SCAG. Connect SoCal, 2020-2045 RTP/SCS, https://www.connectsocal.org/Pages/default.aspx

ATTACHMENT D.1: CITY PLAN, POLICIES AND GUIDELINES

The Transportation Element of the City's General Plan, Mobility Plan 2035, established the "Complete Streets Design Guide" as the City's document to guide the operations and design of streets and other public rights-of-way. It lays out a vision for designing safer, more vibrant streets that are accessible to people, no matter what their mode choice. As a living document, it is intended to be frequently updated as City departments identify and implement street standards and experiment with different configurations to promote complete streets. The guide is meant to be a toolkit that provides numerous examples of what is possible in the public right-of-way and that provides guidance on context-sensitive design.

The Plan for A Healthy Los Angeles (March 2015) includes policies directing several City departments to develop plans that promote active transportation and safety.

The City of Los Angeles Community Plans, which make up the Land Use Element of the City's General Plan, guide the physical development of neighborhoods by establishing the goals and policies for land use. The 35 Community Plans provide specific, neighborhood-level detail for land uses and the transportation network, relevant policies, and implementation strategies necessary to achieve General Plan and community-specific objectives.

The stated goal of Vision Zero is to eliminate traffic-related deaths in Los Angeles by 2025 through a number of strategies, including modifying the design of streets to increase the safety of vulnerable road users. Extensive crash data analysis is conducted on an ongoing basis to prioritize intersections and corridors for implementation of projects that will have the greatest effect on overall fatality reduction. The City designs and deploys Vision Zero Corridor Plans as part of the implementation of Vision Zero. If a project is proposed whose site lies on the High Injury Network (HIN), the applicant should consult with LADOT to inform the project's site plan and to determine appropriate improvements, whether by funding their implementation in full or by making a contribution toward their implementation.

The Citywide Design Guidelines (October 24, 2019) includes sections relevant to development projects where improvements are proposed within the public realm. Specifically, Guidelines one through three provide building design strategies that support the pedestrian experience. The Guidelines provide best practices in designing that apply in three spatial categories of site planning, building design and public right of way. The Guidelines should be followed to ensure that the project design supports pedestrian safety, access and comfort as they access to and from the building and the immediate public right of way.

The City's Transportation Demand Management (TDM) Ordinance (LA Municipal Code 12.26.J) requires certain projects to incorporate strategies that reduce drive-alone vehicle trips and improve access to destinations and services. The ordinance is revised and updated periodically and should be reviewed for application to specific projects as they are reviewed.

The City's LAMC Section 12.37 (Waivers of Dedication and Improvement) requires certain projects to dedicate and/or implement improvements within the public right-of-way to meet the street designation standards of the Mobility Plan 2035.

The Bureau of Engineering (BOE) Street Standard Dimensions S-470-1 provides the specific street widths and public right of way dimensions associated with the City's street standards.

Appendix D

VMT Analysis Worksheets

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

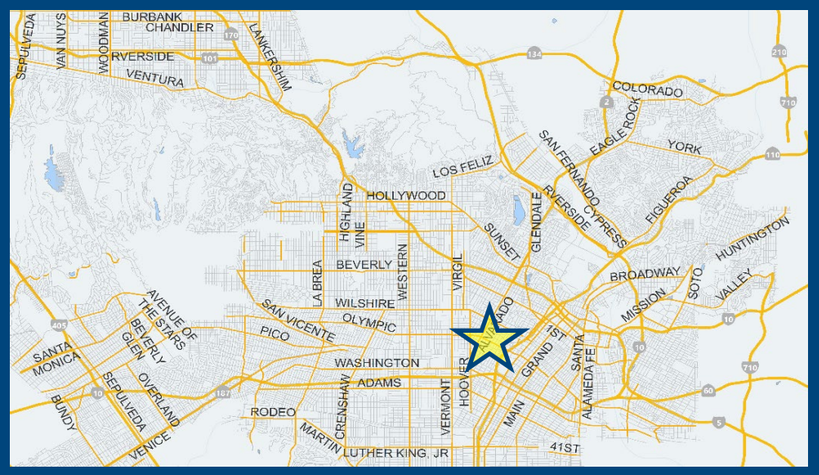
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: J1761 - 905 Beacon Ave

Scenario: Project

Address: 905 S BEACON AVE, 90015



If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a fixed-rail or fixed-

○ Yes ○ No

Existing Land Use

Land Use Type	Value	Unit
Industrial | Warehousing/Self-Storage	394.117	ksf

☐ 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
Retail | High-Turnover Sit-Down Restaurant	41.408	ksf
Housing | Multi-Family	145	DU
Retail | High-Turnover Sit-Down Restaurant	2.4	ksf

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

Project Screening Summary

Existing Land Use	Proposed
0 Daily Vehicle Trips	654 Daily Vehicle Trips
0 Daily VMT	4,276 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	654 Net Daily Trips
The net increase in daily VMT ≤ 0	4,276 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	2.400 ksf

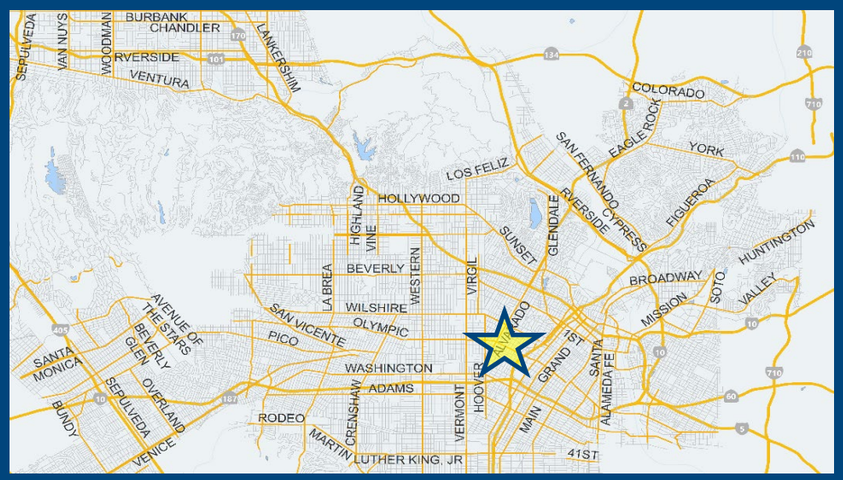
The proposed project is required to perform VMT analysis.

Measuring the Miles

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: J1761 - 905 Beacon Ave
Scenario: Project
Address: 905 S BEACON AVE, 90015



Proposed Project Land Use Type	Value	Unit
Housing | Multi-Family	145	DU
Retail | High-Turnover Sit-Down Restaurant	2.4	ksf

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

- **A** Parking
- **B** Transit
- **C** Education & Encouragement
- **D** Commute Trip Reductions
- **E** Shared Mobility
- **F** Bicycle Infrastructure
- **G** Neighborhood Enhancement

Traffic Calming Improvements
☐ Proposed Prj ☐ Mitigation
25 — percent of streets within project with traffic calming improvements
25 — percent of intersections within project with traffic calming improvements

Pedestrian Network Improvements
☐ Proposed Prj ☐ Mitigation
within project and connecting off-site

Analysis Results

Proposed Project	With
650 Daily Vehicle Trips	**650** Daily Vehicle Trips
4,251 Daily VMT	**4,251** Daily VMT
4.0 Household VMT per Capita	**4.0** Household VMT
N/A Work VMT per Employee	**N/A** Work VMT per Employee

Significant VMT Impact?

Proposed Project	With
Household: No Threshold = 6.0 15% Below APC	**Household: No** Threshold = 6.0 15% Below APC
Work: N/A Threshold = 7.6 15% Below APC	**Work: N/A** Threshold = 7.6 15% Below APC

Measuring the Miles

11/23/2020

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

Project Information			
Land Use Type		**Value**	**Units**
Housing	*Single Family*	*0*	*DU*
	Multi Family	145	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 Restaurant	2.400	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*

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

Analysis Results			
Total Employees: 10 Total Population: 327			
Proposed Project		***With Mitigation***	
650	**Daily Vehicle Trips**	**650**	**Daily Vehicle Trips**
4,251	**Daily VMT**	**4,251**	**Daily VMT**
4	**Household VMT per Capita**	**4**	**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 Work > 7.6	No N/A	Household > 6.0 Work > 7.6	No N/A

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	*Reduce transit headways*	*Reduction in headways (increase in frequency) (%)*	*0%*	*0%*
		Existing transit mode share (as a percent of total daily trips) (%)	*0%*	*0%*
		Lines within project site improved (<50%, >=50%)	*0*	*0*
	Implement neighborhood shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees and residents eligible (%)	*0%*	*0%*
	Transit subsidies	*Employees and residents eligible (%)*	*0%*	*0%*
		Amount of transit subsidy per passenger (daily equivalent) ($)	*$0.00*	*$0.00*
Education & Encouragement	*Voluntary travel behavior change program*	*Employees and residents participating (%)*	*0%*	*0%*
	Promotions and marketing	*Employees and residents participating (%)*	*0%*	*0%*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	*Required commute trip reduction program*	*Employees participating (%)*	*0%*	*0%*
	Alternative Work Schedules and Telecommute	*Employees participating (%)*	*0%*	*0%*
		Type of program	*0*	*0*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
Shared Mobility	*Car share*	*Car share project setting (Urban, Suburban, All Other)*	*0*	*0*
	Bike share	*Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)*	*0*	*0*
	School carpool program	*Level of implementation (Low, Medium, High)*	*0*	*0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	*Includes indoor bike parking/lockers, showers, & repair station (Yes/No)*	*0*	*0*
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	*Included (within project and connecting off-site/within project only)*	*0*	*0*

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Urban

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Parking cash-out	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Price workplace parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Residential area parking permits	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Transit	Reduce transit headways	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Transit subsidies	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Education & Encouragement	Voluntary travel behavior change program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Commute Trip Reductions	Required commute trip reduction program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Employer sponsored vanpool or shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Ride-share program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Shared Mobility	Car-share	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
	School carpool program	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Urban

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement
	Pedestrian network improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
MAX. TDM EFFECT	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*

= Minimum (X%, 1-[(1-A)*(1-B)…])
where X%=

PLACE TYPE MAX:	urban	75%
	compact infill	*40%*
	suburban center	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)…]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,…). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

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	130	-31.5%	89	6.9	897	614
Home Based Other Production	360	-57.2%	154	4.6	1,656	708
Non-Home Based Other Production	212	-7.1%	197	7.7	1,632	1,517
Home-Based Work Attraction	14	-57.1%	6	10.6	148	64
Home-Based Other Attraction	273	-52.4%	130	6.3	1,720	819
Non-Home Based Other Attraction	85	-8.2%	78	7.1	604	554

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	-0.6%	88	610	-0.6%	88	610
Home Based Other Production	-0.6%	153	704	-0.6%	153	704
Non-Home Based Other Production	-0.6%	196	1,508	-0.6%	196	1,508
Home-Based Work Attraction	-0.6%	6	64	-0.6%	6	64
Home-Based Other Attraction	-0.6%	129	814	-0.6%	129	814
Non-Home Based Other Attraction	-0.6%	78	551	-0.6%	78	551

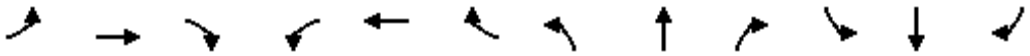
MXD VMT Methodology Per Capita & Per Employee

Total Population: 327
Total Employees: 10
APC: Central

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**1,314**	**1,314**
Total Home Based Work Attraction VMT	**64**	**64**
Total Home Based VMT Per Capita	**4.0**	**4.0**
Total Work Based VMT Per Employee	**N/A**	**N/A**

Appendix E

HCM Analysis Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	576	41	24	260	28	65	216	19	36	126	51
Future Volume (veh/h)	30	576	41	24	260	28	65	216	19	36	126	51
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	33	626	45	26	283	30	71	235	21	39	137	55
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	697	1068	77	429	1030	109	137	305	25	111	257	93
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1067	1724	124	767	1662	176	285	1353	112	181	1141	413
Grp Volume(v), veh/h	33	0	671	26	0	313	327	0	0	231	0	0
Grp Sat Flow(s),veh/h/ln	1067	0	1848	767	0	1839	1751	0	0	1735	0	0
Q Serve(g_s), s	0.9	0.0	13.0	1.3	0.0	4.7	3.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.6	0.0	13.0	14.3	0.0	4.7	10.4	0.0	0.0	6.9	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.10	0.22		0.06	0.17		0.24
Lane Grp Cap(c), veh/h	697	0	1145	429	0	1139	468	0	0	461	0	0
V/C Ratio(X)	0.05	0.00	0.59	0.06	0.00	0.27	0.70	0.00	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	697	0	1145	429	0	1139	626	0	0	617	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.5	0.0	6.8	11.1	0.0	5.2	21.9	0.0	0.0	20.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.2	0.3	0.0	0.6	2.2	0.0	0.0	0.8	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(85%),veh/ln	0.3	0.0	6.5	0.4	0.0	2.7	6.4	0.0	0.0	4.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.6	0.0	9.0	11.4	0.0	5.8	24.1	0.0	0.0	21.5	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		704			339			327			231	
Approach Delay, s/veh		8.9			6.3			24.1			21.5	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.8		18.2		41.8		18.2				
Change Period (Y+Rc), s		4.6		* 4.7		4.6		* 4.7				
Max Green Setting (Gmax), s		31.4		* 19		31.4		* 19				
Max Q Clear Time (g_c+I1), s		16.3		12.4		15.0		8.9				
Green Ext Time (p_c), s		1.8		1.1		4.5		0.9				

Intersection Summary		
HCM 6th Ctrl Delay		13.3
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	568	29	15	260	28	31	24	55	12	18	24
Future Vol, veh/h	39	568	29	15	260	28	31	24	55	12	18	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	0	-	-	0	-	-	-	-	-	-	-	-
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	42	617	32	16	283	30	34	26	60	13	20	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	649	0	0	1070	1062	633	1090	1063	298
Stage 1	-	-	-	-	-	-	717	717	-	330	330	-
Stage 2	-	-	-	-	-	-	353	345	-	760	733	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1247	-	-	937	-	-	199	223	480	193	223	741
Stage 1	-	-	-	-	-	-	421	434	-	683	646	-
Stage 2	-	-	-	-	-	-	664	636	-	398	426	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1247	-	-	937	-	-	172	212	480	147	212	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	172	212	-	147	212	-
Stage 1	-	-	-	-	-	-	407	419	-	660	635	-
Stage 2	-	-	-	-	-	-	610	625	-	316	412	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.4	28.5	21.9
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	270	1247	-	-	937	-	-	271
HCM Lane V/C Ratio	0.443	0.034	-	-	0.017	-	-	0.217
HCM Control Delay (s)	28.5	8	-	-	8.9	-	-	21.9
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0.1	-	-	0.8

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	1694	11	11	1065	61	3	6	16	8	7	34
Future Vol, veh/h	68	1694	11	11	1065	61	3	6	16	8	7	34
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	0	-	-	0	-	-	-	-	-	-	-	-
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	74	1841	12	12	1158	66	3	7	17	9	8	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1224	0	0	1853	0	0	2486	3243	927	2103	3216	612
Stage 1	-	-	-	-	-	-	1995	1995	-	1215	1215	-
Stage 2	-	-	-	-	-	-	491	1248	-	888	2001	-
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	305	-	-	148	-	-	31	9	232	55	10	374
Stage 1	-	-	-	-	-	-	39	104	-	141	252	-
Stage 2	-	-	-	-	-	-	482	243	-	276	103	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	305	-	-	148	-	-	-	~ 6	232	-	~ 7	374
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 6	-	-	~ 7	-
Stage 1	-	-	-	-	-	-	30	79	-	107	232	-
Stage 2	-	-	-	-	-	-	386	223	-	177	78	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	305	-	-	148	-	-	-
HCM Lane V/C Ratio	-	0.242	-	-	0.081	-	-	-
HCM Control Delay (s)	-	20.5	-	-	31.5	-	-	-
HCM Lane LOS	-	C	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	0.9	-	-	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	576	0	0	312	0	0
Future Vol, veh/h	576	0	0	312	0	0
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	-	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	626	0	0	339	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	626	0	965	626
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	339	-
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	-	-	956	-	283	484
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	722	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	956	-	283	484
Mov Cap-2 Maneuver	-	-	-	-	404	-
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	722	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	956	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

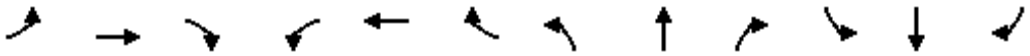
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	61	62	0
Future Vol, veh/h	0	0	0	61	62	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	0	0	66	67	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	133	67	67	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	861	997	1535	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	861	997	1535	-	-	-
Mov Cap-2 Maneuver	861	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1535	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	449	40	35	309	37	62	234	35	24	253	59
Future Volume (veh/h)	80	449	40	35	309	37	62	234	35	24	253	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	488	43	38	336	40	67	254	38	26	275	64
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	603	994	88	486	962	114	128	329	46	82	367	82
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1007	1694	149	873	1640	195	219	1272	176	67	1418	316
Grp Volume(v), veh/h	87	0	531	38	0	376	359	0	0	365	0	0
Grp Sat Flow(s),veh/h/ln	1007	0	1843	873	0	1835	1667	0	0	1801	0	0
Q Serve(g_s), s	3.0	0.0	10.0	1.6	0.0	6.4	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.3	0.0	10.0	11.6	0.0	6.4	12.0	0.0	0.0	11.2	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.11	0.19		0.11	0.07		0.18
Lane Grp Cap(c), veh/h	603	0	1081	486	0	1076	502	0	0	530	0	0
V/C Ratio(X)	0.14	0.00	0.49	0.08	0.00	0.35	0.71	0.00	0.00	0.69	0.00	0.00
Avail Cap(c_a), veh/h	603	0	1081	486	0	1076	697	0	0	740	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.9	0.0	7.2	10.6	0.0	6.5	20.8	0.0	0.0	20.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	1.6	0.3	0.0	0.9	2.1	0.0	0.0	1.6	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(85%),veh/ln	1.1	0.0	5.4	0.6	0.0	3.7	6.8	0.0	0.0	6.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.4	0.0	8.8	10.9	0.0	7.3	22.9	0.0	0.0	22.2	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		618			414			359			365	
Approach Delay, s/veh		8.9			7.7			22.9			22.2	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.8		20.2		39.8		20.2				
Change Period (Y+Rc), s		4.6		* 4.7		4.6		* 4.7				
Max Green Setting (Gmax), s		27.9		* 23		27.9		* 23				
Max Q Clear Time (g_c+I1), s		13.6		14.0		12.0		13.2				
Green Ext Time (p_c), s		2.2		1.5		3.6		1.6				

Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	13.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	409	31	27	293	23	31	77	116	9	46	72
Future Vol, veh/h	62	409	31	27	293	23	31	77	116	9	46	72
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	0	-	-	0	-	-	-	-	-	-	-	-
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	67	445	34	29	318	25	34	84	126	10	50	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	479	0	0	1049	997	462	1090	1002	331
Stage 1	-	-	-	-	-	-	596	596	-	389	389	-
Stage 2	-	-	-	-	-	-	453	401	-	701	613	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1216	-	-	1083	-	-	205	244	600	193	242	711
Stage 1	-	-	-	-	-	-	490	492	-	635	608	-
Stage 2	-	-	-	-	-	-	586	601	-	429	483	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1216	-	-	1083	-	-	142	224	600	102	222	711
Mov Cap-2 Maneuver	-	-	-	-	-	-	142	224	-	102	222	-
Stage 1	-	-	-	-	-	-	463	465	-	600	592	-
Stage 2	-	-	-	-	-	-	465	585	-	263	456	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.7	54.8	24.5
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	297	1216	-	-	1083	-	-	320
HCM Lane V/C Ratio	0.82	0.055	-	-	0.027	-	-	0.431
HCM Control Delay (s)	54.8	8.1	-	-	8.4	-	-	24.5
HCM Lane LOS	F	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	6.8	0.2	-	-	0.1	-	-	2.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	113	1501	34	29	1154	68	13	8	34	25	17	99
Future Vol, veh/h	113	1501	34	29	1154	68	13	8	34	25	17	99
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	0	-	-	0	-	-	-	-	-	-	-	-
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	123	1632	37	32	1254	74	14	9	37	27	18	108

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1328	0	0	1669	0	0	2472	3289	835	2258	3270	664
Stage 1	-	-	-	-	-	-	1897	1897	-	1355	1355	-
Stage 2	-	-	-	-	-	-	575	1392	-	903	1915	-
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	271	-	-	184	-	-	32	9	267	44	~ 9	346
Stage 1	-	-	-	-	-	-	46	116	-	112	216	-
Stage 2	-	-	-	-	-	-	429	207	-	270	114	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	271	-	-	184	-	-	-	~ 4	267	-	~ 4	346
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 4	-	-	~ 4	-
Stage 1	-	-	-	-	-	-	25	63	-	61	178	-
Stage 2	-	-	-	-	-	-	219	171	-	110	62	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	271	-	-	184	-	-	-
HCM Lane V/C Ratio	-	0.453	-	-	0.171	-	-	-
HCM Control Delay (s)	-	28.8	-	-	28.6	-	-	-
HCM Lane LOS	-	D	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	2.2	-	-	0.6	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	449	0	0	381	0	0
Future Vol, veh/h	449	0	0	381	0	0
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	-	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	488	0	0	414	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	488	0	902	488
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	414	-
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	-	-	1075	-	308	580
Stage 1	-	-	-	-	617	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1075	-	308	580
Mov Cap-2 Maneuver	-	-	-	-	433	-
Stage 1	-	-	-	-	617	-
Stage 2	-	-	-	-	667	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1075	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

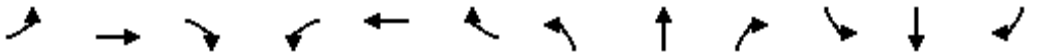
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	68	104	0
Future Vol, veh/h	0	0	0	68	104	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	0	0	74	113	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	187	113	113	0	-	0
Stage 1	113	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	802	940	1476	-	-	-
Stage 1	912	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	802	940	1476	-	-	-
Mov Cap-2 Maneuver	802	-	-	-	-	-
Stage 1	912	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1476	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	583	41	24	267	28	65	216	21	36	126	51
Future Volume (veh/h)	30	583	41	24	267	28	65	216	21	36	126	51
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	33	634	45	26	290	30	71	235	23	39	137	55
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	690	1067	76	422	1031	107	137	305	28	111	259	94
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1060	1726	122	761	1667	172	283	1344	122	180	1141	413
Grp Volume(v), veh/h	33	0	679	26	0	320	329	0	0	231	0	0
Grp Sat Flow(s),veh/h/ln	1060	0	1848	761	0	1839	1750	0	0	1734	0	0
Q Serve(g_s), s	0.9	0.0	13.3	1.3	0.0	4.8	3.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.7	0.0	13.3	14.6	0.0	4.8	10.5	0.0	0.0	6.9	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.09	0.22		0.07	0.17		0.24
Lane Grp Cap(c), veh/h	690	0	1143	422	0	1137	470	0	0	463	0	0
V/C Ratio(X)	0.05	0.00	0.59	0.06	0.00	0.28	0.70	0.00	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	690	0	1143	422	0	1137	626	0	0	617	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.6	0.0	6.9	11.3	0.0	5.3	21.9	0.0	0.0	20.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.3	0.3	0.0	0.6	2.3	0.0	0.0	0.8	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(85%),veh/ln	0.3	0.0	6.7	0.4	0.0	2.8	6.5	0.0	0.0	4.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	0.0	9.2	11.6	0.0	5.9	24.1	0.0	0.0	21.4	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		712			346			329			231	
Approach Delay, s/veh		9.1			6.3			24.1			21.4	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.7		18.3		41.7		18.3				
Change Period (Y+Rc), s		4.6		* 4.7		4.6		* 4.7				
Max Green Setting (Gmax), s		31.4		* 19		31.4		* 19				
Max Q Clear Time (g_c+I1), s		16.6		12.5		15.3		8.9				
Green Ext Time (p_c), s		1.8		1.1		4.5		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	570	34	17	262	28	34	26	63	12	19	24
Future Vol, veh/h	39	570	34	17	262	28	34	26	63	12	19	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	0	-	-	0	-	-	-	-	-	-	-	-
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	42	620	37	18	285	30	37	28	68	13	21	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	315	0	0	657	0	0	1083	1074	639	1107	1077	300
Stage 1	-	-	-	-	-	-	723	723	-	336	336	-
Stage 2	-	-	-	-	-	-	360	351	-	771	741	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1245	-	-	931	-	-	195	220	476	188	219	740
Stage 1	-	-	-	-	-	-	417	431	-	678	642	-
Stage 2	-	-	-	-	-	-	658	632	-	393	423	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1245	-	-	931	-	-	167	209	476	139	208	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	209	-	139	208	-
Stage 1	-	-	-	-	-	-	403	416	-	655	630	-
Stage 2	-	-	-	-	-	-	602	620	-	303	409	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.5	31.3	22.8
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	267	1245	-	-	931	-	-	262
HCM Lane V/C Ratio	0.501	0.034	-	-	0.02	-	-	0.228
HCM Control Delay (s)	31.3	8	-	-	8.9	-	-	22.8
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	2.6	0.1	-	-	0.1	-	-	0.9

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	1694	11	11	1067	65	3	6	16	18	7	45
Future Vol, veh/h	70	1694	11	11	1067	65	3	6	16	18	7	45
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	0	-	-	0	-	-	-	-	-	-	-	-
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	76	1841	12	12	1160	71	3	7	17	20	8	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1231	0	0	1853	0	0	2491	3254	927	2112	3225	616
Stage 1	-	-	-	-	-	-	1999	1999	-	1220	1220	-
Stage 2	-	-	-	-	-	-	492	1255	-	892	2005	-
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	302	-	-	148	-	-	31	9	232	54	9	372
Stage 1	-	-	-	-	-	-	39	103	-	140	251	-
Stage 2	-	-	-	-	-	-	482	241	-	274	103	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	302	-	-	148	-	-	-	~ 6	232	-	~ 6	372
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 6	-	-	~ 6	-
Stage 1	-	-	-	-	-	-	29	77	-	105	231	-
Stage 2	-	-	-	-	-	-	372	221	-	174	77	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	302	-	-	148	-	-	-
HCM Lane V/C Ratio	-	0.252	-	-	0.081	-	-	-
HCM Control Delay (s)	-	20.9	-	-	31.5	-	-	-
HCM Lane LOS	-	C	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	1	-	-	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	579	6	2	315	4	4
Future Vol, veh/h	579	6	2	315	4	4
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	-	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	629	7	2	342	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	636	0	979	633
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	346	-
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	-	-	947	-	277	480
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	716	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	947	-	276	480
Mov Cap-2 Maneuver	-	-	-	-	398	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	715	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	435	-	-	947	-
HCM Lane V/C Ratio	0.02	-	-	0.002	-
HCM Control Delay (s)	13.4	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	19	7	61	64	5
Future Vol, veh/h	13	19	7	61	64	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	14	21	8	66	70	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	155	73	75	0	-	0
Stage 1	73	-	-	-	-	-
Stage 2	82	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	836	989	1524	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	832	989	1524	-	-	-
Mov Cap-2 Maneuver	832	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	941	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	919	-	-
HCM Lane V/C Ratio	0.005	-	0.038	-	-
HCM Control Delay (s)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th Signalized Intersection Summary
1: James M Wood Bl & Burlington Avenue

01/27/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	461	40	35	314	37	62	234	37	24	253	59
Future Volume (veh/h)	80	461	40	35	314	37	62	234	37	24	253	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	501	43	38	341	40	67	254	40	26	275	64
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	598	994	85	475	962	113	128	329	48	82	368	82
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1002	1698	146	862	1643	193	218	1266	185	67	1418	316
Grp Volume(v), veh/h	87	0	544	38	0	381	361	0	0	365	0	0
Grp Sat Flow(s),veh/h/ln	1002	0	1844	862	0	1836	1669	0	0	1800	0	0
Q Serve(g_s), s	3.0	0.0	10.4	1.6	0.0	6.5	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.5	0.0	10.4	12.0	0.0	6.5	12.1	0.0	0.0	11.1	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.10	0.19		0.11	0.07		0.18
Lane Grp Cap(c), veh/h	598	0	1080	475	0	1075	504	0	0	532	0	0
V/C Ratio(X)	0.15	0.00	0.50	0.08	0.00	0.35	0.72	0.00	0.00	0.69	0.00	0.00
Avail Cap(c_a), veh/h	598	0	1080	475	0	1075	697	0	0	740	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.0	0.0	7.3	10.9	0.0	6.5	20.8	0.0	0.0	20.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	1.7	0.3	0.0	0.9	2.2	0.0	0.0	1.6	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(85%),veh/ln	1.1	0.0	5.6	0.6	0.0	3.7	6.9	0.0	0.0	6.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	0.0	9.0	11.2	0.0	7.4	22.9	0.0	0.0	22.2	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		631			419			361			365	
Approach Delay, s/veh		9.1			7.8			22.9			22.2	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	39.7	20.3	39.7	20.3
Change Period (Y+Rc), s	4.6	* 4.7	4.6	* 4.7
Max Green Setting (Gmax), s	27.9	* 23	27.9	* 23
Max Q Clear Time (g_c+I1), s	14.0	14.1	12.4	13.1
Green Ext Time (p_c), s	2.2	1.5	3.6	1.6

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	16

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	411	41	32	296	23	33	78	121	9	48	72
Future Vol, veh/h	62	411	41	32	296	23	33	78	121	9	48	72
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	0	-	-	0	-	-	-	-	-	-	-	-
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	67	447	45	35	322	25	36	85	132	10	52	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	347	0	0	492	0	0	1074	1021	470	1117	1031	335
Stage 1	-	-	-	-	-	-	604	604	-	405	405	-
Stage 2	-	-	-	-	-	-	470	417	-	712	626	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1212	-	-	1071	-	-	198	236	594	185	233	707
Stage 1	-	-	-	-	-	-	485	488	-	622	598	-
Stage 2	-	-	-	-	-	-	574	591	-	423	477	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1212	-	-	1071	-	-	134	216	594	94	213	707
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	216	-	94	213	-
Stage 1	-	-	-	-	-	-	458	461	-	588	578	-
Stage 2	-	-	-	-	-	-	449	571	-	254	451	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.8	66.5	26.5
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	286	1212	-	-	1071	-	-	305
HCM Lane V/C Ratio	0.882	0.056	-	-	0.032	-	-	0.46
HCM Control Delay (s)	66.5	8.1	-	-	8.5	-	-	26.5
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	7.8	0.2	-	-	0.1	-	-	2.3

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	1501	34	29	1156	80	13	8	34	32	17	106
Future Vol, veh/h	120	1501	34	29	1156	80	13	8	34	32	17	106
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	0	-	-	0	-	-	-	-	-	-	-	-
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	130	1632	37	32	1257	87	14	9	37	35	18	115

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1344	0	0	1669	0	0	2487	3319	835	2282	3294	672
Stage 1	-	-	-	-	-	-	1911	1911	-	1365	1365	-
Stage 2	-	-	-	-	-	-	576	1408	-	917	1929	-
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	266	-	-	184	-	-	31	~ 8	267	42	~ 9	342
Stage 1	-	-	-	-	-	-	45	114	-	110	214	-
Stage 2	-	-	-	-	-	-	428	204	-	265	112	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	266	-	-	184	-	-	-	~ 3	267	-	~ 4	342
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 3	-	-	~ 4	-
Stage 1	-	-	-	-	-	-	23	58	-	56	177	-
Stage 2	-	-	-	-	-	-	210	169	-	99	57	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	266	-	-	184	-	-	-
HCM Lane V/C Ratio	-	0.49	-	-	0.171	-	-	-
HCM Control Delay (s)	-	30.9	-	-	28.6	-	-	-
HCM Lane LOS	-	D	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	2.5	-	-	0.6	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	457	6	3	383	3	3
Future Vol, veh/h	457	6	3	383	3	3
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	-	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	497	7	3	416	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	504	0	923	501
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	422	-
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	-	-	1061	-	299	570
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	662	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1061	-	298	570
Mov Cap-2 Maneuver	-	-	-	-	425	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	660	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	487	-	-	1061	-
HCM Lane V/C Ratio	0.013	-	-	0.003	-
HCM Control Delay (s)	12.5	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

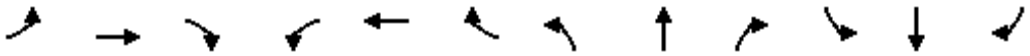
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	13	18	68	106	15
Future Vol, veh/h	8	13	18	68	106	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	9	14	20	74	115	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	237	123	131	0	-	0
Stage 1	123	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	751	928	1454	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	740	928	1454	-	-	-
Mov Cap-2 Maneuver	740	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	1.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1454	-	846	-	-
HCM Lane V/C Ratio	0.013	-	0.027	-	-
HCM Control Delay (s)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	618	46	25	291	29	72	223	20	37	130	55
Future Volume (veh/h)	31	618	46	25	291	29	72	223	20	37	130	55
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	34	672	50	27	316	32	78	242	22	40	141	60
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	658	1051	78	385	1021	103	144	308	26	111	262	100
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1033	1719	128	731	1671	169	303	1320	112	176	1120	430
Grp Volume(v), veh/h	34	0	722	27	0	348	342	0	0	241	0	0
Grp Sat Flow(s),veh/h/ln	1033	0	1847	731	0	1840	1734	0	0	1726	0	0
Q Serve(g_s), s	1.0	0.0	15.0	1.5	0.0	5.4	3.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.4	0.0	15.0	16.4	0.0	5.4	11.1	0.0	0.0	7.2	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.09	0.23		0.06	0.17		0.25
Lane Grp Cap(c), veh/h	658	0	1129	385	0	1125	479	0	0	473	0	0
V/C Ratio(X)	0.05	0.00	0.64	0.07	0.00	0.31	0.71	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	658	0	1129	385	0	1125	596	0	0	589	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.1	0.0	7.4	12.7	0.0	5.6	21.7	0.0	0.0	20.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.8	0.4	0.0	0.7	3.0	0.0	0.0	0.8	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(85%),veh/ln	0.4	0.0	7.5	0.5	0.0	3.2	6.8	0.0	0.0	4.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.3	0.0	10.2	13.0	0.0	6.3	24.8	0.0	0.0	21.2	0.0	0.0
LnGrp LOS	A	A	B	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		756			375			342			241	
Approach Delay, s/veh		10.1			6.8			24.8			21.2	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.3		18.7		41.3		18.7				
Change Period (Y+Rc), s		4.6		* 4.7		4.6		* 4.7				
Max Green Setting (Gmax), s		32.4		* 18		32.4		* 18				
Max Q Clear Time (g_c+I1), s		18.4		13.1		17.0		9.2				
Green Ext Time (p_c), s		1.9		0.9		4.8		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			13.9									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	590	49	15	274	29	48	33	60	12	29	25
Future Vol, veh/h	40	590	49	15	274	29	48	33	60	12	29	25
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	0	-	-	0	-	-	-	-	-	-	-	-
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	43	641	53	16	298	32	52	36	65	13	32	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	330	0	0	694	0	0	1130	1116	668	1150	1126	314
Stage 1	-	-	-	-	-	-	754	754	-	346	346	-
Stage 2	-	-	-	-	-	-	376	362	-	804	780	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1229	-	-	901	-	-	181	208	458	175	205	726
Stage 1	-	-	-	-	-	-	401	417	-	670	635	-
Stage 2	-	-	-	-	-	-	645	625	-	377	406	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1229	-	-	901	-	-	147	197	458	124	194	726
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	197	-	124	194	-
Stage 1	-	-	-	-	-	-	387	402	-	647	624	-
Stage 2	-	-	-	-	-	-	579	614	-	284	392	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.4	49	26.9
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	226	1229	-	-	901	-	-	235
HCM Lane V/C Ratio	0.678	0.035	-	-	0.018	-	-	0.305
HCM Control Delay (s)	49	8	-	-	9.1	-	-	26.9
HCM Lane LOS	E	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	4.3	0.1	-	-	0.1	-	-	1.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	1760	30	11	1121	63	19	30	16	8	36	35
Future Vol, veh/h	73	1760	30	11	1121	63	19	30	16	8	36	35
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	0	-	-	0	-	-	-	-	-	-	-	-
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	79	1913	33	12	1218	68	21	33	17	9	39	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1286	0	0	1946	0	0	2619	3398	973	2216	3380	643
Stage 1	-	-	-	-	-	-	2088	2088	-	1276	1276	-
Stage 2	-	-	-	-	-	-	531	1310	-	940	2104	-
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	284	-	-	133	-	-	26	~ 7	216	46	~ 7	357
Stage 1	-	-	-	-	-	-	33	93	-	128	236	-
Stage 2	-	-	-	-	-	-	456	227	-	256	91	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	284	-	-	133	-	-	-	~ 5	216	-	~ 5	357
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 5	-	-	~ 5	-
Stage 1	-	-	-	-	-	-	24	67	-	92	215	-
Stage 2	-	-	-	-	-	-	303	207	-	87	66	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	284	-	-	133	-	-	-
HCM Lane V/C Ratio	-	0.279	-	-	0.09	-	-	-
HCM Control Delay (s)	-	22.5	-	-	34.7	-	-	-
HCM Lane LOS	-	C	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	1.1	-	-	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	618	0	0	343	0	0
Future Vol, veh/h	618	0	0	343	0	0
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	-	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	672	0	0	373	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	672	0	1045	672
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	373	-
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	-	-	919	-	253	456
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	919	-	253	456
Mov Cap-2 Maneuver	-	-	-	-	379	-
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	696	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	919	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	90	93	0
Future Vol, veh/h	0	0	0	90	93	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	0	0	98	101	0

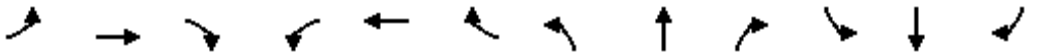
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	199	101	101	0	-	0
Stage 1	101	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	790	954	1491	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	790	954	1491	-	-	-
Mov Cap-2 Maneuver	790	-	-	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1491	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 6th Signalized Intersection Summary
1: James M Wood Bl & Burlington Avenue

01/27/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	471	45	36	328	41	68	254	36	25	263	63
Future Volume (veh/h)	91	471	45	36	328	41	68	254	36	25	263	63
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	99	512	49	39	357	45	74	276	39	27	286	68
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	559	954	91	441	924	117	134	349	46	83	391	89
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	983	1681	161	849	1628	205	225	1260	166	66	1409	320
Grp Volume(v), veh/h	99	0	561	39	0	402	389	0	0	381	0	0
Grp Sat Flow(s),veh/h/ln	983	0	1841	849	0	1833	1651	0	0	1795	0	0
Q Serve(g_s), s	3.7	0.0	11.4	1.8	0.0	7.3	1.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	11.4	13.2	0.0	7.3	13.2	0.0	0.0	11.5	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.11	0.19		0.10	0.07		0.18
Lane Grp Cap(c), veh/h	559	0	1046	441	0	1041	529	0	0	562	0	0
V/C Ratio(X)	0.18	0.00	0.54	0.09	0.00	0.39	0.74	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	559	0	1046	441	0	1041	680	0	0	725	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	8.1	12.1	0.0	7.2	20.2	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	2.0	0.4	0.0	1.1	3.0	0.0	0.0	1.7	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(85%),veh/ln	1.5	0.0	6.2	0.6	0.0	4.2	7.4	0.0	0.0	6.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	0.0	10.0	12.5	0.0	8.3	23.3	0.0	0.0	21.6	0.0	0.0
LnGrp LOS	B	A	B	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		660			441			389			381	
Approach Delay, s/veh		10.2			8.6			23.3			21.6	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.7		21.3		38.7		21.3				
Change Period (Y+Rc), s		4.6		* 4.7		4.6		* 4.7				
Max Green Setting (Gmax), s		28.4		* 22		28.4		* 22				
Max Q Clear Time (g_c+I1), s		15.2		15.2		13.4		13.5				
Green Ext Time (p_c), s		2.3		1.4		3.8		1.6				

Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	19.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	426	35	28	311	24	36	81	124	9	48	74
Future Vol, veh/h	64	426	35	28	311	24	36	81	124	9	48	74
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	0	-	-	0	-	-	-	-	-	-	-	-
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	70	463	38	30	338	26	39	88	135	10	52	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	364	0	0	501	0	0	1099	1046	482	1145	1052	351
Stage 1	-	-	-	-	-	-	622	622	-	411	411	-
Stage 2	-	-	-	-	-	-	477	424	-	734	641	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1195	-	-	1063	-	-	190	228	584	177	227	692
Stage 1	-	-	-	-	-	-	474	479	-	618	595	-
Stage 2	-	-	-	-	-	-	569	587	-	412	469	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1195	-	-	1063	-	-	127	209	584	86	208	692
Mov Cap-2 Maneuver	-	-	-	-	-	-	127	209	-	86	208	-
Stage 1	-	-	-	-	-	-	446	451	-	582	578	-
Stage 2	-	-	-	-	-	-	445	571	-	240	441	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.7	85.1	27.9
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	273	1195	-	-	1063	-	-	296
HCM Lane V/C Ratio	0.96	0.058	-	-	0.029	-	-	0.481
HCM Control Delay (s)	85.1	8.2	-	-	8.5	-	-	27.9
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	9.2	0.2	-	-	0.1	-	-	2.5

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	1565	38	30	1214	70	17	14	35	26	22	102
Future Vol, veh/h	120	1565	38	30	1214	70	17	14	35	26	22	102
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	0	-	-	0	-	-	-	-	-	-	-	-
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	130	1701	41	33	1320	76	18	15	38	28	24	111

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1396	0	0	1742	0	0	2588	3444	871	2372	3426	698
Stage 1	-	-	-	-	-	-	1982	1982	-	1424	1424	-
Stage 2	-	-	-	-	-	-	606	1462	-	948	2002	-
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	251	-	-	169	-	-	27	~ 7	253	37	~ 7	328
Stage 1	-	-	-	-	-	-	40	105	-	100	200	-
Stage 2	-	-	-	-	-	-	411	192	-	253	103	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	251	-	-	169	-	-	-	~ 3	253	-	~ 3	328
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 3	-	-	~ 3	-
Stage 1	-	-	-	-	-	-	19	51	-	48	161	-
Stage 2	-	-	-	-	-	-	186	155	-	73	50	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	0.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	251	-	-	169	-	-	-
HCM Lane V/C Ratio	-	0.52	-	-	0.193	-	-	-
HCM Control Delay (s)	-	33.9	-	-	31.3	-	-	-
HCM Lane LOS	-	D	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	2.7	-	-	0.7	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	471	0	0	405	0	0
Future Vol, veh/h	471	0	0	405	0	0
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	-	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	512	0	0	440	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	512	0	952	512
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	440	-
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	-	-	1053	-	288	562
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	649	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1053	-	288	562
Mov Cap-2 Maneuver	-	-	-	-	416	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	649	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1053	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	80	111	0
Future Vol, veh/h	0	0	0	80	111	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	0	0	87	121	0

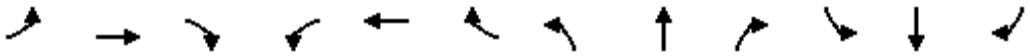
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	208	121	121	0	-	0
Stage 1	121	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	780	930	1467	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	780	930	1467	-	-	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	936	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1467	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 6th Signalized Intersection Summary
1: James M Wood Bl & Burlington Avenue

01/27/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	625	46	25	298	29	72	223	22	37	130	55
Future Volume (veh/h)	31	625	46	25	298	29	72	223	22	37	130	55
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	34	679	50	27	324	32	78	242	24	40	141	60
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	650	1050	77	379	1022	101	144	308	28	111	263	101
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1025	1721	127	726	1675	165	301	1313	121	176	1120	429
Grp Volume(v), veh/h	34	0	729	27	0	356	344	0	0	241	0	0
Grp Sat Flow(s),veh/h/ln	1025	0	1848	726	0	1841	1734	0	0	1725	0	0
Q Serve(g_s), s	1.0	0.0	15.2	1.5	0.0	5.6	3.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	15.2	16.7	0.0	5.6	11.1	0.0	0.0	7.2	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.09	0.23		0.07	0.17		0.25
Lane Grp Cap(c), veh/h	650	0	1127	379	0	1123	481	0	0	475	0	0
V/C Ratio(X)	0.05	0.00	0.65	0.07	0.00	0.32	0.72	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	650	0	1127	379	0	1123	596	0	0	588	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.2	0.0	7.5	12.9	0.0	5.6	21.7	0.0	0.0	20.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	2.9	0.4	0.0	0.7	3.1	0.0	0.0	0.8	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(85%),veh/ln	0.4	0.0	7.6	0.5	0.0	3.2	6.9	0.0	0.0	4.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	0.0	10.4	13.3	0.0	6.4	24.8	0.0	0.0	21.2	0.0	0.0
LnGrp LOS	A	A	B	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		763			383			344			241	
Approach Delay, s/veh		10.3			6.9			24.8			21.2	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.2		18.8		41.2		18.8				
Change Period (Y+Rc), s		4.6		* 4.7		4.6		* 4.7				
Max Green Setting (Gmax), s		32.4		* 18		32.4		* 18				
Max Q Clear Time (g_c+I1), s		18.7		13.1		17.2		9.2				
Green Ext Time (p_c), s		2.0		0.9		4.8		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			13.9									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	592	54	17	276	29	51	35	68	12	30	25
Future Vol, veh/h	40	592	54	17	276	29	51	35	68	12	30	25
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	0	-	-	0	-	-	-	-	-	-	-	-
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	43	643	59	18	300	32	55	38	74	13	33	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	332	0	0	702	0	0	1141	1127	673	1167	1140	316
Stage 1	-	-	-	-	-	-	759	759	-	352	352	-
Stage 2	-	-	-	-	-	-	382	368	-	815	788	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1227	-	-	895	-	-	178	205	455	171	201	724
Stage 1	-	-	-	-	-	-	399	415	-	665	632	-
Stage 2	-	-	-	-	-	-	640	621	-	371	402	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1227	-	-	895	-	-	143	194	455	117	190	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	194	-	117	190	-
Stage 1	-	-	-	-	-	-	385	400	-	642	619	-
Stage 2	-	-	-	-	-	-	572	609	-	271	388	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.5	57.1	28.2
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	224	1227	-	-	895	-	-	227
HCM Lane V/C Ratio	0.747	0.035	-	-	0.021	-	-	0.321
HCM Control Delay (s)	57.1	8	-	-	9.1	-	-	28.2
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	5.1	0.1	-	-	0.1	-	-	1.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	1760	30	11	1123	67	19	30	16	18	36	46
Future Vol, veh/h	75	1760	30	11	1123	67	19	30	16	18	36	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	0	-	-	0	-	-	-	-	-	-	-	-
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	82	1913	33	12	1221	73	21	33	17	20	39	50

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1294	0	0	1946	0	0	2626	3412	973	2228	3392	647
Stage 1	-	-	-	-	-	-	2094	2094	-	1282	1282	-
Stage 2	-	-	-	-	-	-	532	1318	-	946	2110	-
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	282	-	-	133	-	-	26	~ 7	216	46	~ 7	355
Stage 1	-	-	-	-	-	-	33	92	-	126	234	-
Stage 2	-	-	-	-	-	-	456	225	-	254	91	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	282	-	-	133	-	-	-	~ 5	216	-	~ 5	355
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 5	-	-	~ 5	-
Stage 1	-	-	-	-	-	-	23	65	-	89	213	-
Stage 2	-	-	-	-	-	-	291	205	-	83	65	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.3		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	282	-	-	133	-	-	-
HCM Lane V/C Ratio	-	0.289	-	-	0.09	-	-	-
HCM Control Delay (s)	-	22.9	-	-	34.7	-	-	-
HCM Lane LOS	-	C	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	1.2	-	-	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	621	6	2	346	4	4
Future Vol, veh/h	621	6	2	346	4	4
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	-	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	675	7	2	376	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	682	0	1059	679
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	380	-
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	-	-	911	-	249	452
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	911	-	249	452
Mov Cap-2 Maneuver	-	-	-	-	375	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	690	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	410	-	-	911	-
HCM Lane V/C Ratio	0.021	-	-	0.002	-
HCM Control Delay (s)	14	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

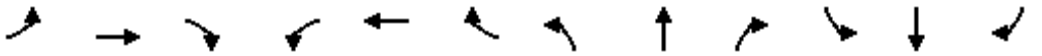
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	19	7	90	95	5
Future Vol, veh/h	13	19	7	90	95	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	14	21	8	98	103	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	220	106	108	0	-	0
Stage 1	106	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	768	948	1483	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	763	948	1483	-	-	-
Mov Cap-2 Maneuver	763	-	-	-	-	-
Stage 1	912	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1483	-	863	-	-
HCM Lane V/C Ratio	0.005	-	0.04	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	483	45	36	333	41	68	254	38	25	263	63
Future Volume (veh/h)	91	483	45	36	333	41	68	254	38	25	263	63
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	99	525	49	39	362	45	74	276	41	27	286	68
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	554	955	89	431	925	115	134	349	48	83	392	89
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	978	1685	157	839	1631	203	224	1255	173	66	1409	320
Grp Volume(v), veh/h	99	0	574	39	0	407	391	0	0	381	0	0
Grp Sat Flow(s),veh/h/ln	978	0	1842	839	0	1834	1652	0	0	1795	0	0
Q Serve(g_s), s	3.8	0.0	11.8	1.8	0.0	7.4	1.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.2	0.0	11.8	13.6	0.0	7.4	13.3	0.0	0.0	11.5	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.11	0.19		0.10	0.07		0.18
Lane Grp Cap(c), veh/h	554	0	1044	431	0	1039	531	0	0	564	0	0
V/C Ratio(X)	0.18	0.00	0.55	0.09	0.00	0.39	0.74	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	554	0	1044	431	0	1039	680	0	0	725	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.3	0.0	8.2	12.5	0.0	7.2	20.2	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	2.1	0.4	0.0	1.1	3.1	0.0	0.0	1.7	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(85%),veh/ln	1.5	0.0	6.3	0.6	0.0	4.3	7.5	0.0	0.0	6.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	0.0	10.3	12.9	0.0	8.3	23.3	0.0	0.0	21.5	0.0	0.0
LnGrp LOS	B	A	B	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		673			446			391			381	
Approach Delay, s/veh		10.4			8.7			23.3			21.5	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.6		21.4		38.6		21.4				
Change Period (Y+Rc), s		4.6		* 4.7		4.6		* 4.7				
Max Green Setting (Gmax), s		28.4		* 22		28.4		* 22				
Max Q Clear Time (g_c+I1), s		15.6		15.3		13.8		13.5				
Green Ext Time (p_c), s		2.3		1.4		3.8		1.6				

Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	24.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	428	45	33	314	24	38	82	129	9	50	74
Future Vol, veh/h	64	428	45	33	314	24	38	82	129	9	50	74
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	0	-	-	0	-	-	-	-	-	-	-	-
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	70	465	49	36	341	26	41	89	140	10	54	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	367	0	0	514	0	0	1123	1069	490	1170	1080	354
Stage 1	-	-	-	-	-	-	630	630	-	426	426	-
Stage 2	-	-	-	-	-	-	493	439	-	744	654	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1192	-	-	1052	-	-	183	221	578	170	218	690
Stage 1	-	-	-	-	-	-	470	475	-	606	586	-
Stage 2	-	-	-	-	-	-	558	578	-	407	463	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1192	-	-	1052	-	-	119	201	578	79	198	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	201	-	79	198	-
Stage 1	-	-	-	-	-	-	442	447	-	570	566	-
Stage 2	-	-	-	-	-	-	430	558	-	232	436	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.8	106.4	30.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	262	1192	-	-	1052	-	-	281
HCM Lane V/C Ratio	1.033	0.058	-	-	0.034	-	-	0.514
HCM Control Delay (s)	106.4	8.2	-	-	8.5	-	-	30.6
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	10.6	0.2	-	-	0.1	-	-	2.7

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	127	1565	38	30	1216	82	17	14	35	33	22	109
Future Vol, veh/h	127	1565	38	30	1216	82	17	14	35	33	22	109
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	0	-	-	0	-	-	-	-	-	-	-	-
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	138	1701	41	33	1322	89	18	15	38	36	24	118

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1411	0	0	1742	0	0	2605	3475	871	2397	3451	706
Stage 1	-	-	-	-	-	-	1998	1998	-	1433	1433	-
Stage 2	-	-	-	-	-	-	607	1477	-	964	2018	-
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	247	-	-	169	-	-	26	~ 6	253	36	~ 7	324
Stage 1	-	-	-	-	-	-	39	103	-	99	198	-
Stage 2	-	-	-	-	-	-	410	188	-	248	101	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	247	-	-	169	-	-	-	~ 2	253	-	~ 2	324
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 2	-	-	~ 2	-
Stage 1	-	-	-	-	-	-	~ 17	45	-	44	159	-
Stage 2	-	-	-	-	-	-	178	151	-	62	45	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	247	-	-	169	-	-	-
HCM Lane V/C Ratio	-	0.559	-	-	0.193	-	-	-
HCM Control Delay (s)	-	36.6	-	-	31.3	-	-	-
HCM Lane LOS	-	E	-	-	D	-	-	-
HCM 95th %tile Q(veh)	-	3.1	-	-	0.7	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	479	6	3	407	3	3
Future Vol, veh/h	479	6	3	407	3	3
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	-	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	521	7	3	442	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	528	0	973	525
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	448	-
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	-	-	1039	-	280	552
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1039	-	279	552
Mov Cap-2 Maneuver	-	-	-	-	408	-
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	642	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	469	-	-	1039	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Control Delay (s)	12.8	-	-	8.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	13	18	80	113	15
Future Vol, veh/h	8	13	18	80	113	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	9	14	20	87	123	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	258	131	139	0	-	0
Stage 1	131	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	731	919	1445	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	720	919	1445	-	-	-
Mov Cap-2 Maneuver	720	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1445	-	831	-	-
HCM Lane V/C Ratio	0.014	-	0.027	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

` FORM GEN. 160A (Rev. 1/82)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

905 S Beacon Av
DOT Case No. CEN20-49088

Date: December 14, 2020

To: Milena Zasadzien, Senior City Planner
Department of City Planning

From: Wes Pringle, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE PROPOSED MIXED-USE PROJECT LOCATED AT 905 SOUTH BEACON AVENUE (PAR-2019-7619-TOC)**

The Department of Transportation (DOT) has reviewed the transportation assessment prepared by Gibson Transportation Consulting, Inc., dated October and November 2020, for the proposed mixed-use project located at 905 South Beacon Avenue 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 DOT's Transportation Assessment Guidelines (TAG), as described below.

DISCUSSION AND FINDINGS

A. Project Description

The project proposes to replace an existing surface parking lot with a seven-story mixed-use development on the southwest corner of Beacon Avenue and James M. Wood Boulevard as illustrated in **Attachment A**. The development will include 145 residential units and 2,400 square feet of ground-floor commercial uses. The project will provide 99 long-term and 12 short-term bicycle parking spaces and 177 vehicle parking spaces within an at-grade parking level and two subterranean parking levels, which will be accessed via a full-access driveway along Beacon Avenue for residents and a full-access driveway along James M. Wood Boulevard for commercial uses. The project is expected to be completed by 2023.

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, 9th 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 new DOT TAG provide instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds.

The DOT 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 APC areas in the City. For the Central 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 Gibson Transportation Consulting, Inc., the project proposes to incorporate the TDM strategy of including bike parking per Los Angeles Municipal Code (LAMC) as a project design feature. The proposed project is projected to have a Household VMT per capita of 4.0 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, DOT 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. Access to the project will be provided along Beacon Avenue and James M. Wood Boulevard. DOT 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 177 vehicles and 111 bicycles within the proposed at-grade and subterranean parking levels. 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, **Beacon Avenue**, a Local Street, would require an 18-foot half-width roadway within a 30-foot half-width right-of-way and **James M. Wood Boulevard**, an Avenue III, would require a 23-foot half-width roadway within a 36-foot half-width right-of-way. The applicant should check with the Bureau of Engineering's Land Development Group to 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 DOT. The project would be accessed via a full-access driveway along Beacon Avenue and a full-access driveway along James M. Wood Boulevard. Truck loading access would be provided by the driveway along James M. Wood Boulevard. Review of this study does not constitute approval of the dimensions for any new proposed driveway. Review and approval of the driveway should be coordinated with DOT's Citywide Planning Coordination Section (201 North Figueroa Street, 5th Floor, Room 550, at 213-482-7024). In order to minimize and prevent last minute building design changes, the applicant should contact DOT 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 driveway placement and design.

4. Worksite Traffic Control Requirements
   DOT recommends that a construction work site traffic control plan be submitted to DOT'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. DOT 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, DOT recommends that the applicant be subject to the terms of the proposed TDM Ordinance update expected in 2020. The updated ordinance is expected to be completed prior to the anticipated construction of this project, if approved.

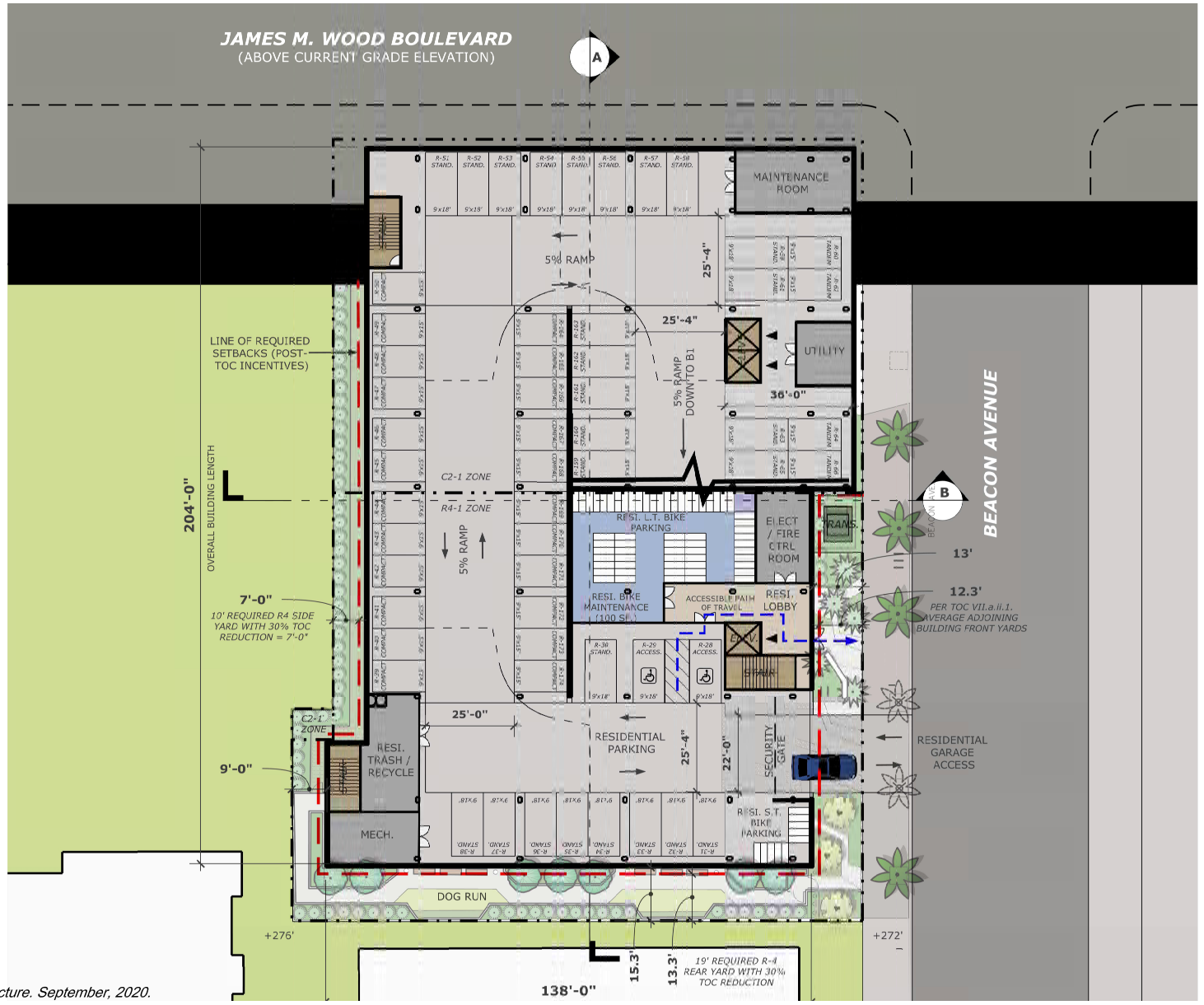
6. Development Review Fees
Section 19.15 of the LAMC identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Jimmy Vivar of my staff at (213) 972-4993.

Attachments

K:\Letters\2020\CEN20-49088_905 S Beacon Ave_mu_tag_ltr.docx

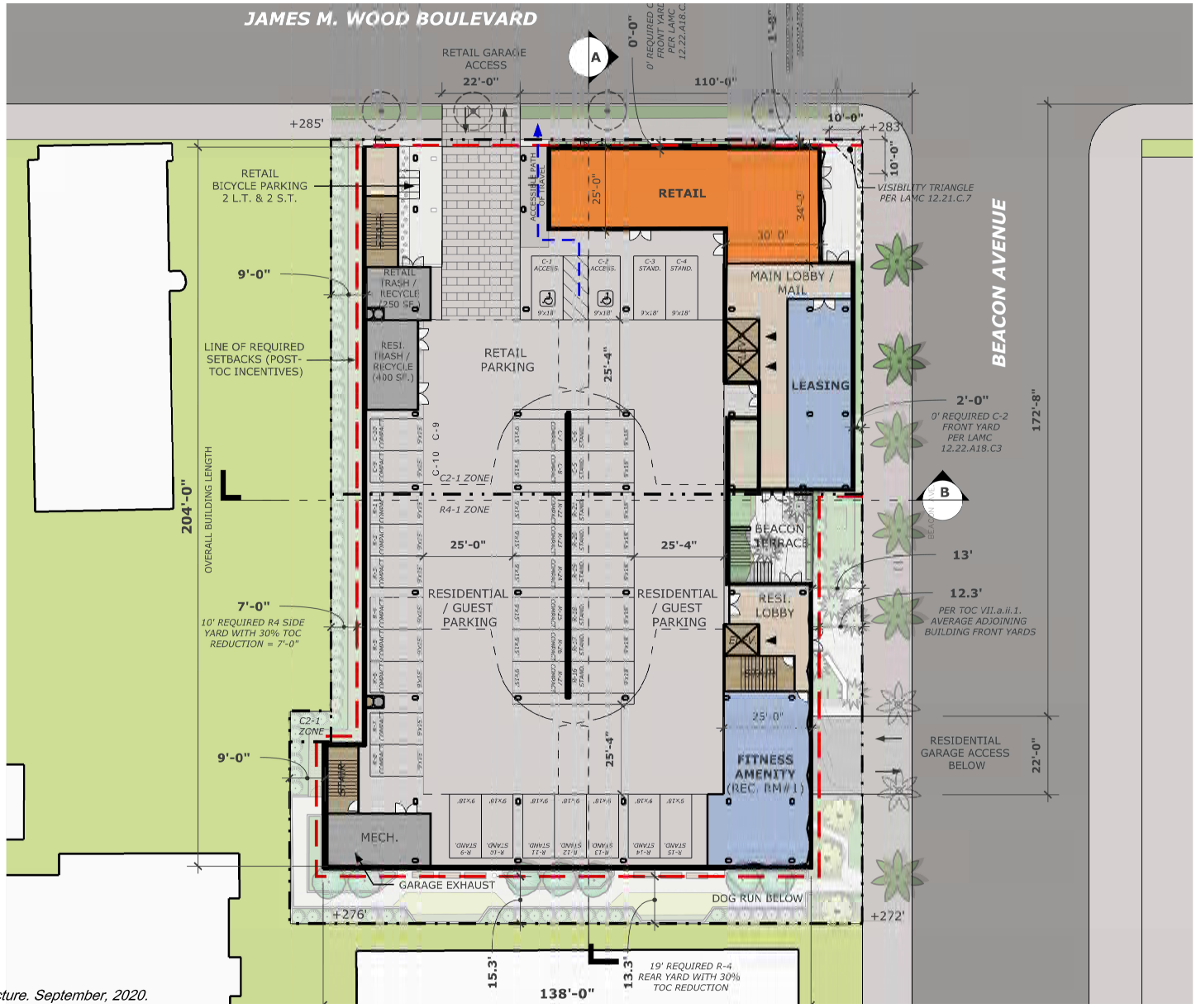
c: Gerald Gubatan, Council District 1
Matthew Masuda, Central District, BOE
Edward Yu, Central District, DOT
Taimour Tanavoli, Case Management Office, DOT
Emily Wong, Gibson Transportation Consulting, Inc.



Source: NEXT Architecture. September, 2020.

PROJECT SITE PLAN (LEVEL 1)

FIGURE 1A



Source: NEXT Architecture. September, 2020.

PROJECT SITE PLAN (LEVEL 2)

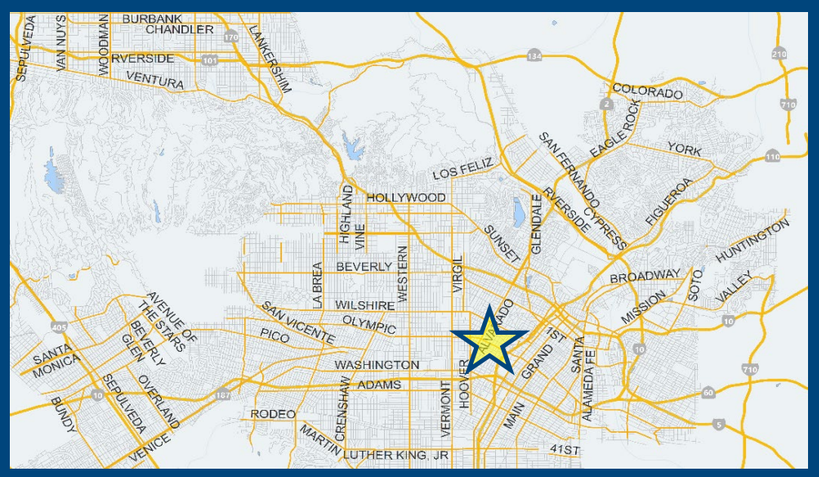
FIGURE 1B

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: J1761 - 905 Beacon Ave
Scenario: Project
Address: 905 S BEACON AVE, 90015



If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a fixed-rail or fixed-

○ Yes ○ No

Existing Land Use

Land Use Type	Value	Unit
Industrial | Warehousing/Self-Storage	394.117	ksf

☐ 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
Retail | High-Turnover Sit-Down Restaurant	41.408	ksf
Housing | Multi-Family	145	DU
Retail | High-Turnover Sit-Down Restaurant	2.4	ksf

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

Project Screening Summary

Existing Land Use	Proposed
0 Daily Vehicle Trips	654 Daily Vehicle Trips
0 Daily VMT	4,276 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	654 Net Daily Trips
The net increase in daily VMT ≤ 0	4,276 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	2.400 ksf

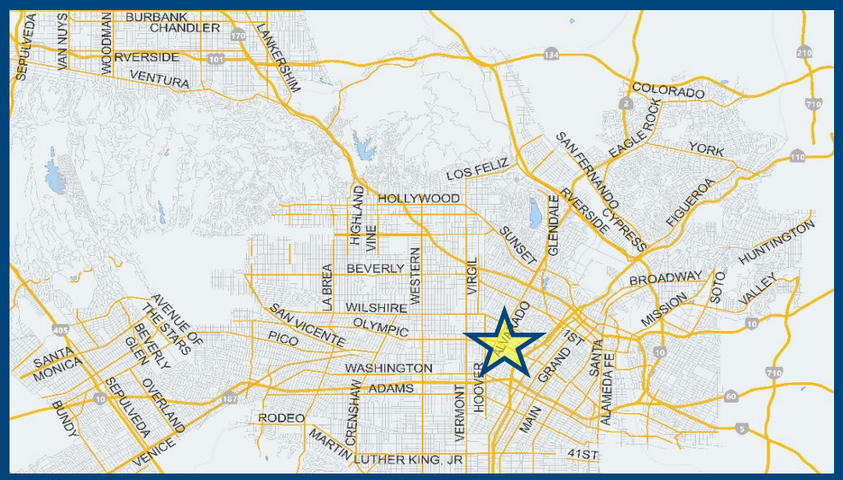
The proposed project is required to perform VMT analysis.

Measuring the Miles

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: J1761 - 905 Beacon Ave
Scenario: Project
Address: 905 S BEACON AVE, 90015



Proposed Project Land Use Type	Value	Unit
Housing | Multi-Family	145	DU
Retail | High-Turnover Sit-Down Restaurant	2.4	ksf

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

- **A** Parking
- **B** Transit
- **C** Education & Encouragement
- **D** Commute Trip Reductions
- **E** Shared Mobility
- **F** Bicycle Infrastructure
- **G** Neighborhood Enhancement

Traffic Calming Improvements
☐ Proposed Prj ☐ Mitigation
25 — percent of streets within project with traffic calming improvements
25 — percent of intersections within project with traffic calming improvements

Pedestrian Network Improvements
☐ Proposed Prj ☐ Mitigation
within project and connecting off-site

Analysis Results

Proposed Project	With
650 Daily Vehicle Trips	**650** Daily Vehicle Trips
4,251 Daily VMT	**4,251** Daily VMT
4.0 Household VMT per Capita	**4.0** Household VMT
N/A Work VMT per Employee	**N/A** Work VMT per Employee

Significant VMT Impact?

Proposed Project	With
Household: No Threshold = 6.0 15% Below APC	**Household: No** Threshold = 6.0 15% Below APC
Work: N/A Threshold = 7.6 15% Below APC	**Work: N/A** Threshold = 7.6 15% Below APC

Measuring the Miles

11/23/2020

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

Project Information			
Land Use Type		**Value**	**Units**
Housing	*Single Family*	*0*	*DU*
	Multi Family	145	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 Restaurant	2.400	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*

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
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Version 1.3

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

Analysis Results			
Total Employees: 10 Total Population: 327			
Proposed Project		***With Mitigation***	
650	**Daily Vehicle Trips**	**650**	**Daily Vehicle Trips**
4,251	**Daily VMT**	**4,251**	**Daily VMT**
4	**Household VMT per Capita**	**4**	**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 Work > 7.6	No N/A	Household > 6.0 Work > 7.6	No N/A

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	*Reduce transit headways*	*Reduction in headways (increase in frequency) (%)*	*0%*	*0%*
		Existing transit mode share (as a percent of total daily trips) (%)	*0%*	*0%*
		Lines within project site improved (<50%, >=50%)	*0*	*0*
	Implement neighborhood shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees and residents eligible (%)	*0%*	*0%*
	Transit subsidies	*Employees and residents eligible (%)*	*0%*	*0%*
		Amount of transit subsidy per passenger (daily equivalent) ($)	*$0.00*	*$0.00*
Education & Encouragement	*Voluntary travel behavior change program*	*Employees and residents participating (%)*	*0%*	*0%*
	Promotions and marketing	*Employees and residents participating (%)*	*0%*	*0%*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	*Required commute trip reduction program*	*Employees participating (%)*	*0%*	*0%*
	Alternative Work Schedules and Telecommute	*Employees participating (%)*	*0%*	*0%*
		Type of program	*0*	*0*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
Shared Mobility	*Car share*	*Car share project setting (Urban, Suburban, All Other)*	*0*	*0*
	Bike share	*Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)*	*0*	*0*
	School carpool program	*Level of implementation (Low, Medium, High)*	*0*	*0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	*Includes indoor bike parking/lockers, showers, & repair station (Yes/No)*	*0*	*0*
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	*Included (within project and connecting off-site/within project only)*	*0*	*0*

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Urban

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Parking cash-out	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Price workplace parking	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Residential area parking permits	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Transit	Reduce transit headways	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Transit subsidies	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Education & Encouragement	Voluntary travel behavior change program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Commute Trip Reductions	Required commute trip reduction program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Employer sponsored vanpool or shuttle	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
	Ride-share program	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	
Shared Mobility	Car-share	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
	School carpool program	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Urban

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement
	Pedestrian network improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
MAX. TDM EFFECT	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*

= Minimum (X%, 1-[(1-A)*(1-B)…])
where X%=

PLACE TYPE MAX:	urban	75%
	compact infill	*40%*
	suburban center	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)…]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,…). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: November 23, 2020
Project Name: J1761 - 905 Beacon Ave
Project Scenario: Project
Project Address: 905 S BEACON AVE, 90015

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	130	-31.5%	89	6.9	897	614
Home Based Other Production	360	-57.2%	154	4.6	1,656	708
Non-Home Based Other Production	212	-7.1%	197	7.7	1,632	1,517
Home-Based Work Attraction	14	-57.1%	6	10.6	148	64
Home-Based Other Attraction	273	-52.4%	130	6.3	1,720	819
Non-Home Based Other Attraction	85	-8.2%	78	7.1	604	554

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	-0.6%	88	610	-0.6%	88	610
Home Based Other Production	-0.6%	153	704	-0.6%	153	704
Non-Home Based Other Production	-0.6%	196	1,508	-0.6%	196	1,508
Home-Based Work Attraction	-0.6%	6	64	-0.6%	6	64
Home-Based Other Attraction	-0.6%	129	814	-0.6%	129	814
Non-Home Based Other Attraction	-0.6%	78	551	-0.6%	78	551

MXD VMT Methodology Per Capita & Per Employee

Total Population: 327
Total Employees: 10
APC: Central

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**1,314**	**1,314**
Total Home Based Work Attraction VMT	**64**	**64**
Total Home Based VMT Per Capita	**4.0**	**4.0**
Total Work Based VMT Per Employee	**N/A**	**N/A**

TABLE 9
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Burlington Avenue & James M. Wood Boulevard	AM PM	13.9 14.9	B B	13.9 14.9	B B
2. [a]	Beacon Avenue & James M. Wood Boulevard	AM PM	49.0 85.1	E F	57.1 106.4	F F
3. [a]	Beacon Avenue & Olympic Boulevard	AM PM	34.7 33.9	D D	34.7 36.6	D E

Notes

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 10 (HCM methodology)

[a] Unsignalized intersection analysis based on the HCM Unsignalized Two-Way Stop-Control methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.